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ABSTRACT

Upon the occasion of the University of Heidelberg (the oldest higher education institution in the Federal Republic of Germany) celebration of its 600th anniversary in 1986, this historical overview and current review of higher education in the Federal Republic looks at a wide range of topics. Contents include: "The Historical Growth of Higher Education"; "Restoration of the Classical University after 1945"; "Development of Student Numbers and Academic Staff"; "Higher Education Policy in the Federative System"; "The Various Types of Higher Education Institutions"; "Representation and Financing of Higher Education Institutions"; "Participation in the Self-Administration of Higher Education Institutions"; "Professors and Other Teaching Staff"; "The Studies System at Universities and Technical Universities"; "The Pattern of Studies at Polytechnics"; "Study Success Level and Higher Education Efficiency"; "Increased Further Education Programmes at Universities"; "Admission to Studies"; "Procedure in the Case of Admission Restrictions"; "Student Organizations in Higher Education"; "Students' Social Welfare--Training Promotion"; "Scholarships for Talented Students"; "Handicapped Students"; "Research and Teaching in Higher Education"; "The Situation in Regard to the Rising Academic Generation"; "Women in Higher Education"; "Higher Education and Other Countries--Exchange of Experience"; "Supraregional Organizations for Students...and Professors"; "Graduates in the Employment System"; and "Political Parties and Higher Educational Policy." The document concludes with an Appendix which lists higher education institutions in West Germany including (1) universities, technical universities and colleges with individual university study courses; (2) philosophical-theological colleges; (3) ecclesiastical colleges of theology; (4) colleges of Jewish studies; (5) teachers' training colleges; (6) colleges of art and music; (7) polytechnics (without ecclesiastical and administrative establishments); and (8) ecclesiastic colleges of social work. A short bibliography, addresses of responsible federal and state federal ministries, other important addresses in higher education, and a glossary of higher education system terms conclude the document. (BZ)

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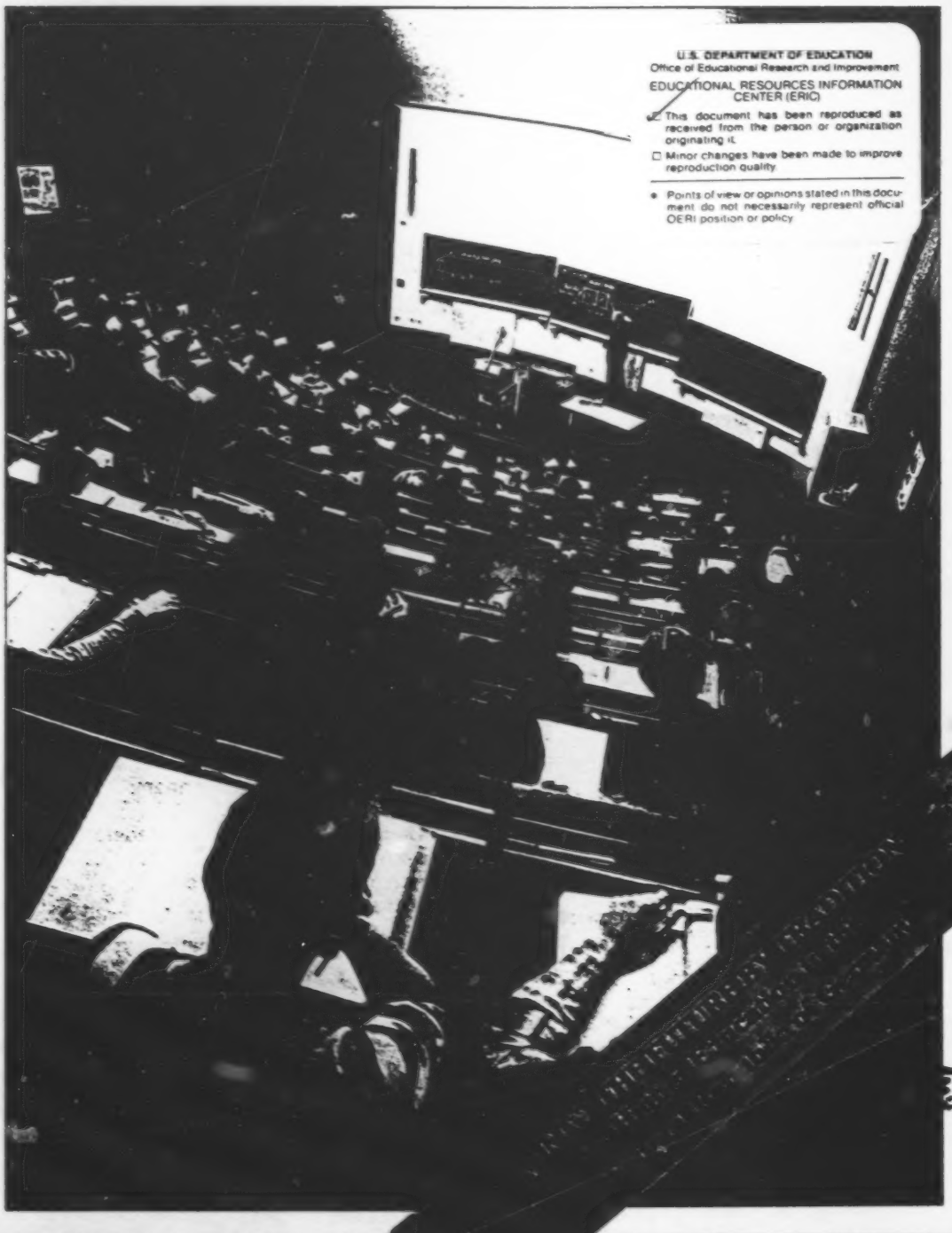
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*) *Bildungsinländer* is the designation for the children of foreign workers who are legally residing in the Federal Republic of Germany.

The historical growth of higher education

The University of Heidelberg, the oldest higher education institution *(Hochschule)* in the Federal Republic of Germany, celebrated the 600th anniversary of its foundation in 1986. It is one of the universities established by the local rulers centuries ago and which have remained on their original site to this day. Others include Leipzig (founded 1409), Rostock (1419), Freiburg (1460), Tübingen (1477), Marburg (1527), Würzburg (1582), Kiel (1665), Göttingen (1737) and Erlangen (1743). The universities in Germany can look back on a rich heritage. Almost all have experienced their ups and downs during their process of development. Here, reasons of a political or financial nature have played an important part, as have denominational or internal disputes.

The ideas put into practice by Wilhelm von Humboldt (1767—1835), on the founding of the University of Berlin (1810), were of paramount importance for the higher education system in Germany. His ideal concept, however, was never realized. Some of the important organizational principles were nevertheless adopted everywhere and are still an integral part of higher education policy. These include, first and foremost, the combination of research *(Forschung)* and teaching *(Lehre)*, the freedom of the arts and sciences *(Wissenschaft)* and, subsequently, the autonomy of university research and teaching programmes. These principles served as signposts for higher education in many other countries, too. New universities were founded on these lines in the 19th and 20th centuries, including, in particular, technical universities *(Technische Hochschulen)*. The higher education system was further expanded by the inclusion of teachers' training academies *(Pädagogische Akademien)* in 1926.

Under the tyrannic heel of Nazi dictatorship (1933—45), German universities suffered a sharp decline. Countless professors were removed from their posts either because of their descent or political views. Universities were subjected to strict political control, there was direct intervention in the teaching and research programmes. Unfortunately, many professors and students showed themselves incapable of resisting the temptations of totalitarian ideology. The traditional German university was severely mauled, especially in the modern social and natural sciences. The consequences of this era have only been very slowly overcome.

The Heidelberg University anniversary celebrations took place under the slogan *Aus Tradition in die Zukunft* (Into the Future by Tradition). Change and development have always been the hallmark of German universities. The influence of new technical and social advances has constantly made higher education aware of its present-day duty to ensure that renewal and further development take place in the fields of teaching and research. This means that tried and proven traditions must be measured against present and future tasks and challenges.

Restoration of the classical university after 1945

A large number of university buildings were either totally destroyed or severely damaged in World War II: only a few of them remained intact. Consequently, one of the urgent tasks in the early days after 1945 was the restoration of working facilities, external reconstruction. At the same time, following the course of events over the twelve years of Nazi rule, a process of inner renewal was also undertaken. Even as early as 1948, attention was drawn to the fact that social and technical changes over the past decades now made university reform essential. Nevertheless, in the immediate postwar period, the basic pre-1933 principles were reinstated once more. This resulted, in large measure, in the restoration of the classical university concept.

The Federal Republic of Germany was officially founded following the promulgation of the Basic Law *(Grundgesetz)* on 23 May 1949. In the ensuing years, student numbers began to increase, accompanied by a marked expansion of the university system.

Development of student numbers and academic staff

First-year student numbers

Year	First-year students at universities, teachers' training colleges and colleges with university study courses	at art and music colleges	at polytechnics	total	% of the 19- (under 21) year-old population
1960	60,000	2,600	(16,800)	79,400	7.9
1970	91,600	3,400	30,500	125,700	15.4
1980	135,600	3,100	56,300	195,000	19.1
1981	151,500	3,000	62,100	216,600	20.9
1982	155,200	3,100	66,800	225,100	21.3
1983	160,100	2,900	69,900	233,000	21.5
1984	151,500	2,900	66,900	221,300	20.6
1985	141,300	3,000	63,400	207,700	19.6

Students and academic staff

Year	Students at universities, teachers' training colleges and colleges with university study courses	at art and music schools	at polytechnics	total	Posts for academic staff total	Number of students per post
1960	238,400	8,500	(44,200)	291,100	19,100	15
1970	410,100	10,900	89,500	510,500	54,500	9
1980	823,900	18,300	202,000	1,044,200	79,100	13
1981	877,900	19,100	224,700	1,121,700	79,600	14
1982	931,900	19,900	251,400	1,203,200	79,900	15
1983	976,600	20,400	276,100	1,273,100	80,100	16
1984	1001,100	21,000	292,100	1,314,200	80,200	16
1985	1015,100	21,700	301,300	1,338,100	80,400	17

From 1960 onwards, a number of new foundations came in the wake of this expansion programme, especially in regions where such facilities had been practically non-existent previously. They include Bochum (1962), Regensburg (1962), Düsseldorf (1965), Konstanz (1966), Ulm (1967), Dortmund (1968), Augsburg (1969), Bielefeld (1969), Bremen, Osnabrück and Kaiserslautern-Trier (all 1970), Bayreuth (1972), Passau (1972), Oldenburg (1974) and lastly Hamburg-Harburg Technical University (1980). Most of these had no buildings to fall back on and had to be entirely planned and built from foundations to roof on new campuses.

In the late 1960s, a new type of university emerged against a background of lively, indeed, stormy debate about the future tasks and structures of universities: this new higher education institution was the comprehensive university *(Gesamthochschule)*. With the availability of regional study facilities in mind, innovational universities of this type were opened in Kassel (1970), Bamberg, Duisburg, Eichstätt, Essen, Paderborn, Siegen and Wuppertal (all 1972). In all cases, the already existent teacher training and engineering colleges in these towns were integrated into the new higher education establishments.

Fachhochschulen (polytechnics) were set up between the years 1969 and 1971. They were a further development of former engineering schools and senior technical schools *(Ingenieurschulen* and *höhere Fachschulen)*, with particular emphasis on economics *(Wirtschaft)*, social affairs *(Sozialwesen)* and agriculture *(Landwirtschaft)*. Following considerable investments and expansion of the teaching body (according to new principles), these poly-

technics have developed into independent higher education institutions.

On the strength of these developments, the higher education system in the Federal Republic of Germany has, since the early 1960s, been considerably expanded to three times its original intake and differentiated. Viewed overall, availability of places was able to keep in step with the greatly increased demand for study opportunities. Restricted admission only proved necessary — as it still does — for a few disciplines. This enormous expansion programme received the full support of both the general public and politicians who were convinced that an industrial nation such as the Federal Republic of Germany had to provide a higher education system capable of meeting the demands for study opportunities. Here, the main consideration was the provision of a larger number of employees with graduate qualifications, as well as impressive reinforcements for science and society.

When the ever-growing number of first-year students prompted thoughts of extending restricted admission (Numerus clausus) to a large number of disciplines, the policy of "keeping the university doors open" was emphatically underscored in 1977. This lead temporarily to an "overload" in various disciplines, particulary computer science, jurisprudence and the economic sciences. Additional funds enabled these disciplines to increase their capacity to a point where all applicants were admitted.

The overall number of freshmen has been on the decline since 1984. This signals the end of the expansion phase. There are two main reasons for this development: first, the average number of babies born in the Federal Republic of Germany in 1965 was in the region of one million, a figure which has since sunk to about 580,000. The first-year students from the high birthrate groups have already entered higher education. Now the numerically weak year groups are awaited. Second, in view of the present unfavourable state of the employment market for university graduates, interest in study courses has declined. Forecasts for the coming years suggest there will be an even further drop in first-year university entrants.

Higher education policy in the federative system

The Federal Republic of Germany is a *Bundesstaat* comprised of the following federal states *(Bundesländer):* Baden-Württemberg, Bavaria *(Bayern),* Bremen, Hamburg, Hesse *(Hessen),* Northrhine-Westphalia *(Nordrhein-Westfalen),* Lower Saxony *(Niedersachsen),* Rhineland-Palatinate *(Rheinland-Pfalz),* Saarland and Schleswig-Holstein — as well as Berlin (which enjoys special status on the strength of the Quadripartite Agreement). Responsibility for education policy and planning is determined by this federative structure: the federal states enjoy "overall responsibility" whilst the Federal Government has no more than limited legislative and financial powers and a say in educational planning. This is of considerable importance for the higher education system. With only a few exceptions, universities and other higher education institutions are federal-state facilities. The federal states have to take all basic decisions and provide the necessary funds.

For many years now, the federal states have been working in concert in the Standing Conference of the Education Ministers of the Federal States *(Ständige Konferenz der Kultusminister der Länder/KMK).* The basic goal of this body is to coordinate the education systems of the different federal states in regard to structures, facilities and final certificates. The KMK also deals with important questions relating to higher education. This coordination did not prove adequate, however.

Efficient higher education institutions are absolutely essential for an industrialized country. In a federative state structure, it is in the interest of uniform living conditions to provide specific developments within the separate federal states with a framework, i.e. a common basis. This safeguards equal standards in the higher education system and the mobility of persons throughout the federal area. It also gua-

Following the introductory session for freshmen (here the Faculty of Medicine). The new first-year students are met by tutors who prepare them for their study courses. Photo: INP/Manfred Vollmer

rantees a high standard of higher education. The latter, incidentally, costs a great deal of money. As a result, a system has been devised which permits the Federal Government *(Bund)* to exert influence on higher education without jeopardizing its federative pattern or the political responsibility of the individual *Länder.*

Higher education legislation by the Federal Government and the federal states

Amendments to the Basic Law (Constitution) in 1969 granted the Federal Government powers to regularize statutorily the general principles governing higher education and the opportunity of collaborating with the *Länder* in the planning and financing of higher education investments. In addition, machinery was set up for joint educational planning and research promotion by the *Bund* and the *Länder.* This provided the basis for the Federal Higher Education Framework Law *(Hochschulrahmengesetz)* which was approved in 1976, and amended in 1985. It contains general principles, especially in regard to study courses and examinations, admission to studies, university research, arts and science personnel, organization and administration of higher education institutions, and participation of all members of universities and colleges in self-administration (autonomy) of these institutions. The eleven *Länder* have to respect these principles in their own higher education legislation which often contains individual regulations for their particular state.

Higher education building

Since 1970, investments for higher education institutions and university hospitals (buildings, large scientific apparatus) have been planned jointly (for all types of higher education institutions) by the Federal Government and the *Länder* via its Planning Committee for Higher Education Building. The individual projects are combined annually within a framework plan. The investment costs are borne on a fifty-fifty basis by the *Bund* and the *Länder.* This planning and funding system facilitated the foundation of new universities and colleges in the 1970s. The planning unit is based on study places in terms of space. In recent years an average of 21,000 places has been provided yearly and old buildings replaced by new ones. Based on area, 784,000 places have been available since late 1985. The actual absorption capacity of higher education institutions depends largely on the existing teaching staff and is higher.

Federal Government / Federal States Commission

The Federal Government/Federal States Commission for Educational Planning and Research Promotion *(Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung/BLK)* set up in 1970, is not only responsible for higher education, but all other education areas as well. It presented on Overall Education Plan *(Gesamtbildungsplan)* in 1973. Its continuation failed to materialize in 1982. Since that time the BLK has been concerned with important educational

questions affecting both the *Bund* and the *Länder*. In 1985 it published a report on the future prospects of graduates in the employment system, and a supplementary report on professional prospects for teachers. The BLK also publishes an annual handbook entitled *Studien- und Berufswahl* (Choice of Studies and Career): its 400 pages provide information on study possibilities in higher education. Each issue has a print of 500,000 copies which are distributed free of charge to schools and other institutions.

The annual deliberations by the BLK on the funding of the German Research Association *(Deutsche Forschungsgemeinschaft/DFG)* are of great importance for higher educational research.

The Science Council *(Wissenschaftsrat)* is a particularly important forum for basic higher education matters. This body was set up jointly by the *Bund* and the *Länder* in 1957. The Science Council acts only in an advisory capacity and can therefore only make recommendations. Since, however, it is made up of representatives of the *Bund* and *Länder* governments, as well as members of higher education institutions and research institutes, and industry, it has resulted in highly effective cooperation between the Federal Government and the federal states and the arts and sciences. The Science Council draws up recommendations in regard to content and structural development in higher education. It drafts general concepts and comments on problems besetting the higher education system. It also comments in an advisory capacity on higher education investments to be included in the framework plan. The Science Council's financial recommendations are usually heeded in subsequent governmental decisions.

The various types of higher education institutions

With very few exceptions, the 241 higher education institutions in the Federal Republic of Germany are state facilities. There are different types:

- universities, technical universities, and several institutions specializing in disciplines normally found at universities
- teachers' training colleges *(Pädagogische Hochschulen)*
- art and music colleges *(Kunst- und Musikhochschulen)*
- polytechnics *(Fachhochschulen)*
- comprehensive universities *(Gesamthochschulen)*

Traditionally, the universities and technical universities *(Universitäten* and *Technische Universitäten)* form the core of the higher education system. Quantitatively they still represent the most important area. Their responsibilities include general research, teaching and training of the rising academic generation: accordingly, they have the right to award doctorates and habilitations. Their studies programmes include theology *(Theologie)*, jurisprudence *(Rechtswissenschaft)*, economics *(Wirtschaftswissenschaft)*, Social Science *(Sozialwissenschaft)*, the natural sciences *(Naturwissenschaften)*, agriculture *(Agrarwissenschaft)*, engineering *(Ingenieurwissenschaft)* and medicine *(Medizin)*. The larger universites offer most disciplines, but not engineering as a rule. Study programmes at technical universities, which were originally restricted to the natural sciences and engineering, have, for the most part, now been extended to include other faculties. They likewise have the character of universities (as suggested to some extent by their designation of *Technische Hochschule*). The universities founded since 1960 tend only to offer a certain number of the disciplines to be found at the older establishments. The new foundations include two universities belonging to the Federal Armed Forces *(Bundeswehr)* where future officers can study.

The five largest universities are currently (late 1985): Munich (56,999 students), Free University of Berlin (52,708), Cologne (46,033), Münster (43,585) and Hamburg (41,430). More than half the universities have a student population exceeding 10,000.

Apart from the universities, there are also individual higher education institutions specializing in human medicine, veterinary medicine, administration or sport. The Churches run their

own institutions or faculties which provide training programmes for theologians, supplementary to the theological faculties at universities. In the last few years two small private universities have been opened in Koblenz and Witten-Herdecke (specializing in medicine and economics, in particular).

The universities with medical faculties and medical colleges also have their own large hospitals *(Kliniken)* as a rule. Because of their excellent equipment, they enjoy top rating in the hospital system in the Federal Republic of Germany. These university hospitals cooperate closely with various local public and other hospitals which, as teaching hospitals *(Lehrkrankenhäuser)*, assist in the practical training of future doctors.

The teachers' training colleges *(Pädagogische Hochschulen* or *Erziehungswissenschaftliche Hochschulen)* developed after 1945 from the former teachers' training academies *(Pädagogische Akademien)* and other teacher training facilities. Principally, they train teachers for primary schools *(Grundschulen)*, main schools *(Hauptschulen)* and special schools *(Sonderschulen)*. They occasionally train intermediate-school *(Realschule)* teachers and/or teachers for Secondary Level I *(Sekundarstufe I)*, i.e. up to Class/Grade 10. The training of grammar-school *(Gymnasium)* and vocational-school *(Berufsschule)* — and, to a certain extent intermediate-school — teachers takes place mainly at universities or technical universities. Teacher study courses culminate in a state examination *(Staatsprüfung)*. In conjunction with their research commitments in educational science and pedagogy, teachers training colleges are entitled (to a certain extent) to award doctorates. Since 1970, the teachers training colleges have been amalgamated with the universities in some of the *Länder*, often in the form of teacher training faculties or special fields *(Pädagogische Fakultäten* or *Fachbereiche)*. Independent teachers' training colleges now only exist as such in Baden-Württemberg, Rhineland-Palatinate and Schleswig-Holstein. Several teachers' training colleges have been closed down in the last few years because they were not being made full use of — a result of the drop in teacher requirements because of the low birthrate years.

Art colleges provide training programmes for artistic careers, especially in painting, sculpture, design, goldsmith's art and architecture. Study courses in the fine arts are, to some extent, minimally structured: final examinations are scheduled in certain cases only. Particularly well-qualified students are sometimes awarded the title of *Meisterschüler* (Master Pupil) after several years of study. Final state examinations are only held in those cases where students intend to become art teachers in schools. Music colleges *(Musikhochschulen)* offer training courses in all music subjects, from individual instruments to church music. At some institutions there are training courses for singers, actors and dancers (there are also schools of drama and dancing outside the higher education system). As a rule, intermediate and final examinations are prescribed. Those wishing to become music teachers in schools also conclude their studies with a final examination.

The polytechnics *(Fachhochschulen)*, which were opened around 1970, offer highly practice-related training courses of a scientific or artistic nature, particularly engineering, economics, social work, agriculture and food science — as well as design. Study courses are shorter than at universities. With a share of 22 per cent of the total student population and 30 per cent of first-year students, the polytechnics represent the most extensive section of the higher education system after universities nowadays. Although polytechnics have certain practice-related research and development commitments, their ability to actually do so is limited by staff structure and lack of funds.

As a general rule, polytechnics offer study courses in several special areas. The average number of students per college varies between 1,000 and 3,000. Polytechnics concentrating on one particular discipline, such as those in Baden-Württemberg and Berlin, for instance, are usually very much smaller. The three largest (late 1985) are Cologne (14,398 students), Munich (13,969) and Hamburg (12,200).

One special feature is the fact that the polytechnics specializing in sociology are, to some extent, ecclesiastical establishments. About 40 per cent of students reading this subject are to be found in these institutions *(kirchliche Fachhochschulen)* run by the Churches.

A further special feature are the 24 colleges devoted solely to administration study courses *(verwaltungsinterne Fachhochschulen).* These facilities provide training for future civil servants *(Beamte)* who will occupy more senior positions in the various branches of public administration. Only young persons who have already been recruited for the civil service *(öffentlicher Dienst)* study at these colleges.

The comprehensive universities *(Gesamthochschulen),* which came into being around 1970, embrace all fields of research and teaching normally covered by universities, teachers training colleges, polytechnics and, in several cases, art colleges. In the early 1970s, the view was held that as many universities as possible in the Federal Republic of Germany should become comprehensive, offering differentiated study programmes. This did not come to pass. The problems involved in the realization of comprehensive projects, which were to include existing universities, proved to be extremely complicated and practically insuperable, following a study by educational research. Consequently, all plans for further universities of this type, beyond those already in existence, were dropped. The comprehensive universities in Northrhine-Westphalia and Hesse have now been consolidated. They offer study courses to be found at both universities and polytechnics: one of their particular characteristics is the fact that they offer integrated study programmes culminating in two different types of degree *(Diplom).* The courses combine theory with practice and are open to students with varying scholastic qualifications. A basic studies course *(Grundstudium)* is followed by a main studies course *(Hauptstudium),* differentiated according to focal points. This course concludes with a final (degree) examination after six to eight semesters — or provides the entitlement to further studies. The comprehensive universities in Northrhine-Westphalia and Hesse bear the official German title of *Universität-Gesamthochschule* and have the same research and teaching commitments as conventional universities.

The comprehensive universities include the Open University *(Fernuniversität)* in Hagen which commenced operations in 1976. Today it boasts of 27,000 enrolled members who are catered for by regional study centres.

Representation and financing of higher education institutions

In order to fulfil their research and teaching commitments and to tackle questions of common concern, the universities collaborate on a continuous basis via the West German Rectors Conference *(Westdeutsche Rektorenkonferenz/ WRK),* first established in 1949 in the Federal Republic of Germany. Here, rector means university principal. The WRK informs the public about university tasks, problems and, above all, working conditions. This takes the form of recommendations to parliaments and governments on science and education policy. The WRK also cooperates closely with public offices and scientific organizations. The WRK numbers 190 member universities. The statutes differ according to type of higher education institution: the bulk of members' rights fall to the universities and other establishments entitled to award doctor degrees. They all have one vote in the WRK. The polytechnics, art and music colleges have only one vote per federal state *(Bundesland)* for their particular type of institution.

Apart from the WRK, there are special rectors' conferences for several types of college (state polytechnics, ecclesiastical polytechnics, music colleges, art colleges) who deal with specific matters.

In the last two decades, extensive legislation has been enacted in regard to higher education, first and foremost by the eleven *Länder.* The Federal Higher Education Framework Law of 1976 standardized the basic principles governing all higher education institutions. It is based on the concept that the different types of *Hochschulen,* particularly universities and polytechnics, have different commitments which they will retain in the future. The 1985 amendendment further underscored this. Even so, the basic legal and administrative principles, which

Johann Wolfgang Goethe University, Frankfurt/Main: like their German counterparts, foreign students are not required to pay fees at higher education institutions in the Federal Republic of Germany.

Photo: INP/Barbara Klemm

were originally intended for universities, apply in essence to all higher education facilities. The *Länder* have also made due allowance for this in their own higher education legislation.

Thus, all state universities and colleges in the Federal Republic of Germany, apart from certain exceptions, such as the administration colleges, are public institutions of the individual *Länder* and, at the same time, bodies incorporated under public law *(Körperschaften des öffentlichen Rechts).* They are entitled to self-administration within the framework of the legislative pattern. The limits are set out by the supervisory rights of the federal state ministry *(Landesministerium)* concerned. The fundamental order and other statutes, resolved by the individual higher education institutions for instance,require official approval. This also applies to examination regulations.

Statutory regulations for higher education have been considerably extended over the last two decades. This stems partially from rulings by the Federal Constitutional Court *(Bundesverfassungsgericht)* which has demanded that certain questions and problems be clarified by means of legislation.

Organization-wise, higher education establishments are split up into departments fields *(Fachbereiche)* or faculties *(Fakultäten).* The faculties, which were formerly very large in some cases, have been broken down into smaller units. In addition to *Fachbereiche* and *Fakultäten,* there are also special scientific facilities and central operational units such as libraries and computer centres.

The principal of a higher education institution is a full-time rector *(Rektor)* or president *(Präsident),* who is elected into office for several years. In other words, the former procedure of electing a principal from within the professorial body for a period of one year has been abandoned. What is more, such principals fulfilled their duties on a part-time-basis. The principals or presidents are appointed nowa-

days by the responsible state ministry *(Landesministerium)*.

All higher education institutions are, of course, dependent on the financial system: state universities in the Federal Republic of Germany do not impose study fees. Consequently, the running costs and investments of the individual universities and colleges have to be approved in each case by the state parliament *(Landesparlament)*. The Federal Government *(Bund)* reimburses 50 per cent of this expenditure. Higher education institutions and their individual members can apply for funds for research projects from special Federal Government or federal state programmes, as well as from central agencies such as the German Research Association *(Deutsche Forschungsgemeinschaft/DFG)*. A further financial source are research contracts, e.g. with industrial enterprises. Basically, there are no essential differences in the funding system for the various types of higher education institutions. In reality, however, the financial allocations per student for running costs are less for polytechnics than they are for universities — as a rule.

Participation in the self-administration of higher education institutions

The restoration of the classical university after 1945 — in conjunction with higher education expansion — considerably strengthened the position of university professors. In what were known as *Ordinarien-Universitäten* the professorial body alone made the basic decisions on research and teaching. This led to violent disagreements in universities at the end of the 1960s. The parliaments gave way to the pressure exerted by university assistants and students and set out (in some cases far-reaching) basic principles for their involvement in decision-making processes. This "democratization" in the shape of the "group university" *(Gruppenuniversität)* had to be revised at a later date following several rulings by the Federal Constitutional Court.

Making due allowance for these rulings, the Higher Education Framework Law of 1976 stipulated that all members of a higher education institution were entitled and obliged to participate in self-administration according to their qualifications, function, responsibility and degree to which they were affected (principle of graduated participation according to function). In the major collegiate organs at higher education institutions, all member groups — professors, students, academic assistants, other members of staff — are entitled to a seat and a vote. In the committees concerned with teaching, research and the appointment of professors, the professors enjoy the majority of seats and votes. Following the amendment to the Higher Education Framework Law in 1985, the professorial body also enjoys the absolute majority in the committee responsible for electing the rector or president. This new ruling has been protested by Opposition politicians and a number of higher education institutions.

The participation of all members of higher education institutions in self-administration *(Selbstverwaltung)* has become a reality nowadays.

The resultant time-consuming committee meetings, of course, tend to leave their mark on the efficiency of this autonomous process and has given rise to criticism to a number of cases.

Professors and other teaching staff

The 1976 Higher Education Framework Law (partially amended in 1985) standardized the structure of full-time university teaching staff. This streamlining was actuated by the growth of a technically unnecessary variety of posts and functions.

The professors, who represent the most important group in higher education, fulfil their research and teaching — and examination — commitments independently. The basic requirements for professors are a completed course of higher education studies, teaching aptitude and

a marked ability to engage in scientific or artistic activity. Over and above this, depending on the post in question, would-be professors are expected to offer proof of

- additional academic achievements (such as habilitation, as a rule)
- special achievements in the application or development of scientific findings or methods during a minimum of five years professional practice outside higher education.

The first alternative is usual procedure at universities, and, to some extent, technical universities. The second is prescribed for professorships at polytechnics and is also customary in a large number of cases in engineering disciplines at universities or technical universities.

Habilitation at universities has long been the established proof of teaching ability: habilitation procedure is carried out by the education institutions themselves — or the relative faculties or departments. The emphasis is placed on proof of the ability to undertake independent research, particularly in the form of a habilitation paper *(Habilitationsschrift)*: this procedure also calls for a scientific colloquium and a public lecture.

Professorial posts are advertised publicly. Professors are appointed by the responsible state authority on the recommendation of the higher education institutions concerned and are, as a rule, granted permanent civil service status: appointment as temporary civil servants is also possible.

Teaching events will also be held independently by senior assistants *(Oberassistenten)*, senior engineers *(Oberingenieure)* and lecturers *(Dozenten)* in future. In accordance with the amendents to the Higher Education Framework Law in 1985, posts are to be set up primarily for up-and-coming teaching staff in possession of their habilitation. Senior assistants, senior engineers and university lecturers are appointed for a period of four to six years. This procedure allows young academics to remain for a limited time at higher education institutions if they are not appointed professor immediately after acquiring their habilitation.

Scientific (academic) assistants *(wissenschaftliche Assistenten)* are employed in research and teaching for a period of three to six years and must have a doctorate. There are also scientific staff *(wissenschaftliche Mitarbeiter)* who may be employed on a limited or unlimited basis. They must have completed a course of study. The possibility of concluding a time-limited contract has now been regularized in detail and extended by the *Zeitvertragsgesetz* of 1985. This is also in the interest of the essential flexibility of staff. The duties of these groups involve teaching students specialized knowledge and practical skills, and instructing them in the application of scientific methods. Scientific (academic) assistants are to be given the opportunity to further qualify (habilitation, for instance). Accordingly, they are given adequate time to devote themselves to their own academic activities.

Teaching staff without professorial qualifications can also be employed for special duties. These include the imparting of practicall skills and knowledge (such as in languages, drawing, workshop practice and sport).

The teaching programme can also be supplemented at higher education institutes by offering qualified persons (outside the higher education system) a teaching contract *(Lehrauftrag)*; they are allowed to hold their events independently.

The studies system at universities and technical universities

Basically, subjects are offered in the form of study courses. These take the form of lecture or teaching programmes *(Lehrveranstaltungen)* with certificates *(Leistungsnachweise)* and/or examinations *(Prüfungen)* which are tailored to the requirements of final examinations. Contents and pattern of study courses are given in study syllabi, study and examination regulations. The courses are based on full-time attendance. Special part-time study programmes

are offered basically only by Hagen Open University and, in isolated cases, by some of the polytechnics.

As a general rule, study courses culminate in a qualifying final examination. Depending on the studies goal, such final examinations can be a university/college *(Hochschulprüfung)*, a state *(Staatsprüfung)* or a church exam *(kirchliche Prüfung)*. University/college examinations are either *Diplomprüfungen* or *Magisterprüfungen*, i.e. degree or master's degree. These are organized by the individual higher education institutions whilst state examinations *(Staatsprüfungen)* are a federal *(Bund)* or federal state *(Land)* responsibility.

The degree *(Diplom)* examination is the final examination in the natural sciences, engineering, economics and sociology courses. This examination includes the writing of a treatise *(Diplomarbeit)* which takes several months. On successfully completing the examination, degrees are awarded: according to their particular subject, they allow graduates to style themselves *Diplomchemiker, Diplomvolkswirt, Diplomgeograph, Diplomingenieur* etc.

Whereas degree study courses basically consist of only one subject, a master's degree course usually includes several arts subjects, and, in some cases, sociology and economics. The course is normally made up of a main subject *(Hauptfach)* and two subsidiary subjects *(Nebenfächer)*, or two main subjects. Numerous combinations are possible. The final examination likewise includes the writing of a treatise *(Magisterarbeit)* which also takes several months. On successfully passing the final examinations, graduates are awarded the title of M.A. *(Magister artium)*.

Would-be teachers, lawyers, doctors, dental surgeons, veterinary surgeons and food chemists have to sit a state examination on concluding their studies. These examinations are held by state examination offices or committees, in collaboration with the professors.

In several disciplines, especially philological and cultural subjects, university/college examinations can be taken as well as a state exam. This also applies to the natural sciences. Theology studies for future clergymen conclude with a church examination. This corresponds in many ways to a state examination.

Studies pattern

The examination regulations lay down a standard period of studies *(Regelstudienzeit)* for each course. They state when a course of studies with final examination may be concluded, provided there is a corresponding pattern of study regulations and teaching programmes. According to the Higher Education Framework Law, these stipulated lengths of studies, i.e. four years at universities, may, strictly speaking, only be exceeded in exceptional (justifiable) cases. Medical studies, for instance, take six years, including a practical year. For some teacher courses the standard period is only three years.

At most higher education institutions, the academic year is split up into a winter semester (WS) and a summer semester (SS). Winter semester programmes begin in September or October, summer semester programmes mostly in April. Admission of first-year students to certain disciplines is restricted to once a year, i.e. the winter semester. This particularly applies to technical and natural science subjects.

Study courses are usually divided into a basic *(Grundstudium)* and a main course *(Hauptstudium)*. The basic course lasts four semesters as a rule and provides a general foundation and, in the first instance, little specialized knowledge. It normally concludes with an interim *(Zwischenprüfung)* or preliminary degree examination *(Diplomvorprüfung)*: an intermediate examination is obligatory for courses lasting for four or more years. The main course basically consolidates subject knowledge and frequently includes specialization *(Schwerpunktbildung)*. For this purpose, obligatory optional subjects *(Wahlpflichtfächer)*, a specific number of which have to be taken, and free-choice options *(Wahlfächer)* are offered. In this way, students can choose their own specialized fields and, if they so wish, may opt for special or burgeoning subjects for which these are no specific courses.

Acceptance for *Promotion*, i.e. the acquisition of a doctor's degree, basically requires candidates to have successfully concluded a studies course at university (for which a min-

imum grade is often demanded). The completion of a dissertation or thesis *(Doktorarbeit)* usually takes several years (with the exception of medicine in which the thesis is mainly completed whilst students are still studying). A dissertation is supposed to represent personal scientific achievement with fundamentally new findings. If the thesis is accepted, an oral examination follows. Successful candidates are awarded the title of doctor in their particular field, e.g. *Dr. theol., Dr. jur., Dr. phil., Dr. med., Dr.-Ing.* etc.

Efforts to improve the structure of university studies

Actual lengths of study have long been in excess of the time-limits (or the formerly customary minimum time allowed) in most disciplines. Average length of studies at universities and technical universities is currently almost six years. All efforts to shorten the length of studies have proved unsuccessful so far. There are several reasons for this: the desire of the various disciplines to be as broadly represented as possible in the individual study courses; the overloading of the studies organization because of the steady growth in the student population over the last few decades; the mentality of many students who see no good reason for prematurely ending their interesting and stimulating life on the campus, particularly in view of the poor employment prospects.

This situation prompted the Science Council *(Wissenschaftsrat)* to present basic recommendations on the structure of university studies in January 1986. These recommendations make an emphatic demand for studies to be so structured that

- study courses (including final qualifying examinations) should be completed in a maximum of four years and three months,
- suitable graduates in individual disciplines should be offered postgraduate courses to specialize or take their doctor's degree,
- further training studies should be included in the education programme.

Representatives of the federal states *(Länder)* on the Science Council have expressed their approval of the recommendations. It is now to be hoped that they will be implemented in the coming years.

Expansion of postgraduate studies

Some of the higher education institutions are already offering postgraduate courses *(Postgraduiertenstudien)* in various disciplines to graduates who have successfully passed a final university or state examination. Further academic or professional qualifications are provided in additional, supplementary or continuation courses lasting one to two years. These studies conclude with a certificate *(Leistungsnachweis)* or an additional academic title *(akademischer Grad)*. Graduates wishing to take their doctor's degree, however, may do so without following a continuation studies course. There is a large measure of agreement on the necessity to expand the postgraduate programme at universities.

The pattern of studies at polytechnics

The polytechnics *(Fachhochschulen)* have their own independent training programmes. The special areas *(Fachrichtungen)* offered correspond in part to those at universities. They are, however, of a marked practice and application-related nature. Here, the qualifications of the teaching staff, which are determined by special experience and achievements in professional practice, and the practical work sessions outside the polytechnics (which constitute an integral part of the studies courses) are of great importance.

Much greater importance is attached to the broad tailoring of important subject matter to the requirements of professional practice rather than comprehensive treatment of theoretical bases. The principal learning aims include the understanding of practical relevance as well as the possibilities and problems of application.

The discussion of concrete cases and work on specific projects are of paramount importance. Much, of course, is left to professional experience and subsequent further training.

The length of study courses is significant: they take three to three-and-a-half years. In addition, two practical semesters are designated in Baden-Württemberg and Bavaria, and one in several other federal states *(Länder)*.

Study programmes are subject to strict organization unlike most university courses. Even so, they are also divided into a basic and a main studies course. In the majority of the *Länder* the basic course is accompanied by a preliminary and intermediate examination. Students are given the opportunity of specializing in certain fields in the main course.

Studies culminate in a final examination *(Diplomprüfung)*. This usually consists of a lengthy written paper *(Abschlußarbeit)*, several invigilated tests *(Klausuren)* and an oral exam *(mündliche Prüfung)*. Wherever possible, current problems in professional practice are taken as examination subjects in the final paper. Successful candidates are awarded an academic title according to their particular discipline: *Diplom-Ingenieur (FH)*, *Diplom-Betriebswirt (FH)* etc. The letters (FH) after the title indicate that it is a *Fachhochschule*, i.e. polytechnic qualification.

Following the three-year courses, some polytechnics offer additional specialization, usually of one year's duration covering such subjects as data processing *(Datenverarbeitung)*, nuclear technology *(Kerntechnik)*, tropical technology *(Tropentechnik)*, economics for engineers *(Wirtschaft für Ingenieure)* and environmental conservation *(Umweltschutz)*. The polytechnics do not have the right to award doctor's degrees *(Promotionsrecht)*.

Study success level and higher education efficiency

A summarizing report on the quantitative success level achieved by the higher education system in the Federal Republic of Germany has not been published since 1983. The assessment of studies achievement is based on the length of study, the number of students who swop disciplines, the number of dropouts and success levels in final examinations.

The success level *(Erfolgsquote)*, i.e. the proportion of first-year students (including those who had temporarily broken off or swopped their study courses) who successfully completed their studies in a final examination, was given as 90 per cent. According to later investigations and estimates, 16 per cent of the student population break off their studies without completing them and without the intention of resuming them at a later date. The number in this category at polytechnics comes to 14 per cent.

The 1983 statistics state that an average of 7.5 per cent of all candidates from all higher education institutions and study courses failed their final examination. Here, it should be pointed out that the number of failures in law and economics are high compared with medicine where failures are rare (not least because of the intermediate examinations).

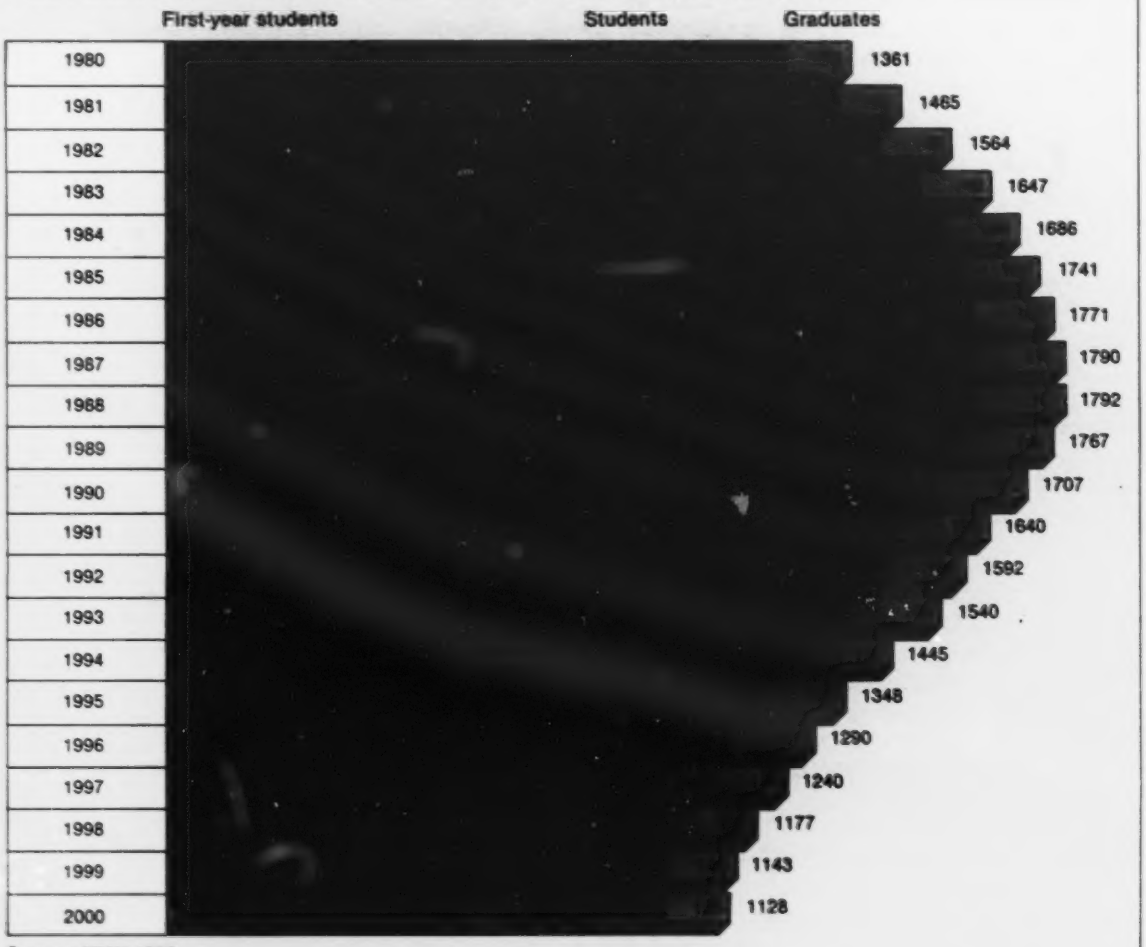
The average age of graduates is also important as far as the efficiency of the higher education system is concerned. This has come under constant fire of late, particularly in comparison with other European countries. Here, the relatively long lengths of study (on average) at universities is a major contributory factor. The current average age of graduates is more than 27.

Increases further education programmes at universities

Numerous universities and polytechnics offer further education/training courses *(Weiterbildungskurse)*, or their professors take part in further training programmes at other institutions, such as adult education centres *(Volkshochschulen)* or administration academies *(Verwaltungsakademien)**. In this connection, close cooperation has developed with

* See "Life-long learning — Further education in the Federal Republic of Germany" (Bildung und Wissenschaft 1986 No. 1—2)

Forecast of first-year students, students and graduates to the year 2000 (in 1000s)



Source: KMK 1986

industrial associations and organizations of the working world.

One of the aims of higher education policy is the expansion of further training programmes at higher education institutions to intensify the technology and knowledge transfer to society and industry. This means that higher education will be entering into competition with other organizations in future.

Admission to studies

There are several paths leading to higher education in the Federal Republic of Germany. Universities, art and music colleges demand Higher School Certificate *(Hochschulreife/Abitur)* as the basic admission requirement. The certificate can be of a general *(allgemein)* or subject-tied *(fachgebunden)* nature. The general Higher School Certificate is acquired at a grammar school *(Gymnasium)* after 13 years at school. It qualifies the holder to study the discipline of his choice. The subject-tied Higher School Certificate is obtained by sitting an examination concentrating on certain focal points only. It entitles the holder to study within these

specific areas, i.e. technology, agriculture etc. By sitting a supplementary examination in a second foreign language, the subject-tied certificate can be converted into a general one.

As a general rule, admission to an art or music college presupposes proof of special talent or an aptitude test. Several study courses at these institutions are also open to applicants not in possession of Higher School Certificate if they offer proof of special artistic talent in an entrance examination.

Admission to a polytechnic is usually granted to applicants who have obtained a final certificate *(Abschlußprüfung)* at a senior technical school *(Fachoberschule)* which may be acquired after 12 years at school. The senior technical schools provide a general foundation and preliminary vocation-related training in certain fields (e.g. economy, technology). This often takes place on a part-time basis.

In recent years, an increasing number of students with Higher School Certificate (with which they are entitled to study at university) have been embarking on courses at polytechnics. Their proportion of the first-year students at these institutions already numbers about 40 per cent. This development has been welcomed. In this way, polytechnics are showing that they are a part of the higher education system of interest to *Abiturienten* (holders of the Higher School Certificate) with practical inclinations.

Opportunities also exist for persons who failed to complete their course at a grammar school or senior technical school, or who are already gainfully employed. They are able to acquire a general or subject-tied Higher School Certificate or a polytechnic entrance qualification *(Fachhochschulreife)* by means of an examination, particularly for highly talented employed persons, at evening schools, special courses and other facilities (Alternative Educational Path, i.e. *Zweiter Bildungsweg)*.

Procedure in the case of admission restrictions

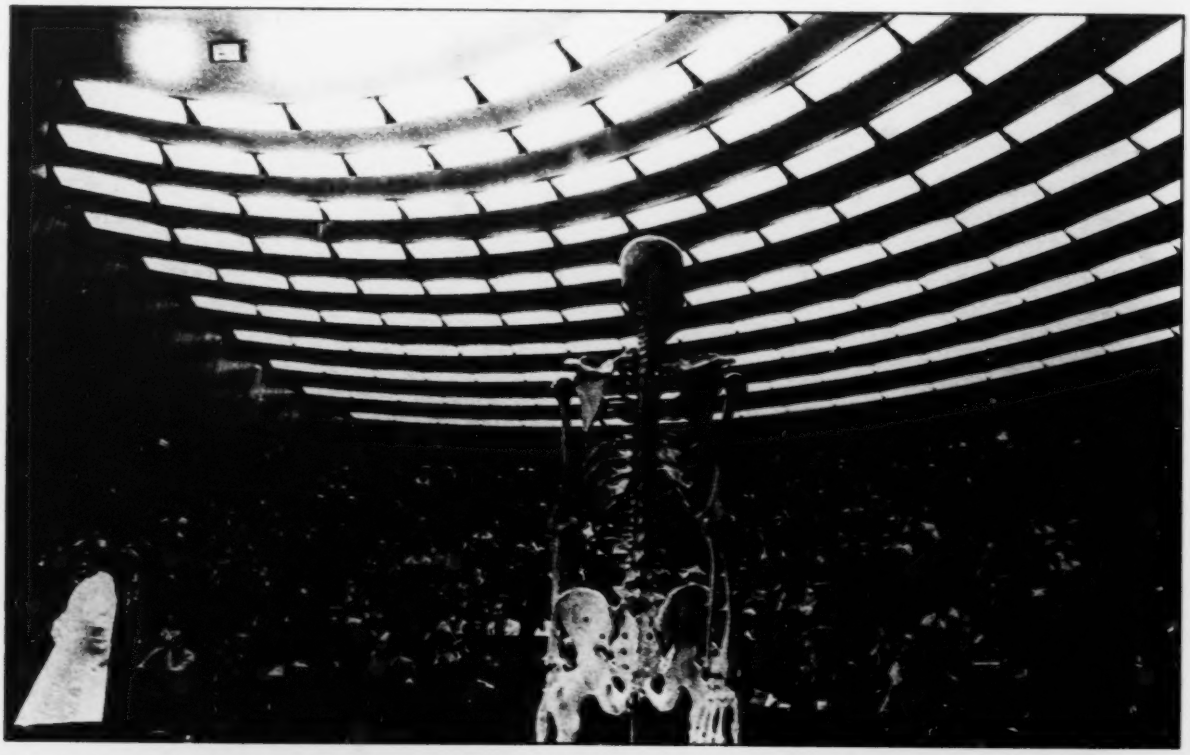
Basically, once the admission conditions have been fulfilled, all that remains to do is to register for the chosen course of studies at a higher education institution. Entrance examinations are not held at state universities in the Federal Republic of Germany. In some cases, however, the number of applicants for certain study courses is so large that local or federal-wide admission restrictions have to be imposed. In such cases proof of entrance entitlement must be accompanied by special admission to the desired discipline.

Places for study courses subjected to federal-wide admission restrictions *(Zulassungsbeschränkungen)* are awarded to German applicants by the Dortmund-based Central Office for the Allocation of Study Places *(Zentralstelle für die Vergabe von Studienplätzen/ZVS)*.

A special selection procedure has been in force since 1986 in human medicine, dental surgery and veterinary medicine. All applicants for these disciplines must take a test. A system of quotas governs admission and allocation of study places:

- about 10 per cent of the places are reserved for particular groups (e.g. foreign nationals, hardship cases etc).
- 45 per cent of the places are awarded on the strength of combination of Higher School Certificate grade *(Abiturnote)* and test result *(Testergebnis)*,
- 10 per cent of the allocations are based entirely on the test result,
- 15 per cent on the strength of personal interviews conducted by the higher education institutions themselves,
- 20 per cent are awarded according to the length of time candidates have been on a waiting list; here, inter alia, vocational training and length of gainful employment are given special consideration.

For certain disciplines, including agriculture, architecture, biology, pharmacy and psycho-



Ruhr University, Bochum: anatomy lecture. The number of students wishing to read medicine continues to be very large — despite the restrictive selection of applicants. *Photo: INP/Manfred Vollmer*

logy, applicants are selected according to a special procedure, i.e. Higher School Certificate grade (60 per cent) and waiting time (40 per cent). Here, likewise, a proportion of the places is reserved for special groups of applicants (foreign students, hardship cases etc).

Applicants for study courses in business management, economics, jurisprudence, computer science *(Informatik)* and surveying are guaranteed a place by means of a distribution procedure. Not all applicants can expect to be allocated a place at the university or college of their choice.

In the case of local admission restrictions, the higher education institution itself decides whether to grant entrance or not. In most cases, such decisions are based on the principles of general selection procedure.

Student organizations in higher education

The way in which the student-body's interests are looked after at the individual higher education institutions varies from *Land* to *Land*.

In nine of them, the students are automatically members of the student body *(Pflichtmitgliedschaft)* and obliged to pay contributions *(Pflichtbeiträge)*. This is known as the *verfaßte Studentenschaft* which is, in each case, represented by the student organization *Allgemeiner Studentenausschuß/AStA*. The student bodies' commitments are of a higher educational nature: they involve looking after the students' study, social and cultural interests and the cultivation of international student relations. They also include the care of foreign students. At some universities, this area of commitments is exceeded by various political activities time and time again:

this usually ends up in legal disputes. Baden-Württemberg and Bavaria feel that student bodies of this type, with compulsory membership, are no longer justified; this is why they are no longer in existence there. They have been replaced by student representation which is not elected by one particular corporate body *(Körperschaft)*.
Apart from the student body *(Studentenschaft)* there are usually a variety of other associations *(Vereinigungen)* or groups of a political, social, artistic or ecclesiastical nature. The student associations *(Korporationen)*, which formerly dominated the image of the student body at universities, are of little importance nowadays. Only about 5 per cent of all students in the Federal Republic of Germany now belong to these associations, also known as *Verbindungen* in German. Admittedly, their numbers at several universities are considerably higher. Membership is almost exclusively male. Several of the student organizations formed in the last few decades must be seen in conjunction with the major political parties. Their activities also introduce party-political discussion onto the campus.

Students' social welfare — Training promotion

The welfare of the student body is the responsibility of what are called *Studentenwerke*. They run at least one student restaurant *(Mensa)* at each higher education institution and student hostels *(Studentenwohnheime)* offering accommodation for 75,000 persons. In addition, the *Studentenwerke* maintain, inter alia, social advice services, student houses with club and cultural facilities, kindergartens and accommodation agencies. Every student must pay an annual average contribution of DM 70 to the *Studentenwerke*.

All matriculated students are obliged to join a statutory health insurance scheme *(gesetzliche Krankenkasse)* for which they have to pay insurance contributions themselves (DM 60 a month in 1986). All students are automatically insured (statutorily) against accidents in higher education institutions.

The *Studentenwerke* at individual universities and colleges are all amalgamated in the *Deutsches Studentenwerk* which represents the socio-political interests of the students. Among its various activities, this organization also undertakes social surveys every three years to establish the actual situation of students. The subsequently presented reports form the basis for state measures.

In a move to improve equality of opportunity in the education system, students, who do not have the necessary financial means to pay for subsistence and studies, are eligible for assistance *(Ausbildungsförderung)* under the terms of the Federal Training Promotion Law *(Bundesausbildungsförderungsgesetz/BAföG)*. The proviso for eligibility is insufficient personal income or assets, and those of spouse *(Ehegatte)* or parents, to cover the costs of subsistence and studies *(familienabhängige Förderung)*. From 1971 onwards, non-repayable grants were made available: these were later changed to a combination of grants *(Zuschüsse)* and interest-free loans *(zinslose Darlehen)*. With effect from 1983, all grants basically assumed the form of interest-free loans. Because of their particular situation, students studying abroad are awarded a grant. About one-third of the students affected received financial help in this way in 1985. For this purpose, the state *(Bund:* 65 per cent, *Länder:* 35 per cent) made DM 2,300 million available. The duration of financial assistance depends on the length of time usually required to successfully complete the selected studies course: maximum duration is laid down for the individual disciplines.

Financial assistance is usually paid out by the local *Studentenwerke*. From the autumn of 1986, the monthly payment amounts to DM 710. Since family incomes are also taken into account, only a certain number of those entitled to financial assistance receive the full amount.

The whole loan has to be repaid within a maximum of 20 years, beginning five years after graduation. In certain cases — such as completing studies more quickly than the time prescribed — there is part-remission of debt.

Mensa (student restaurant) at the Friedrich Alexander University, Erlangen. Economy-price meals for undergraduates. *Photo: INP/Stümpel*

Scholarships for talented students

Apart from BAföG assistance, which is dependent on the social situation of students, scholarships are awarded to talented students and doctoral candidates (due allowance being made for parental income).

For this purpose, the Federal Minister of Education and Science *(Bundesminister für Bildung und Wissenschaft)* provides the Studies Foundation of the German People *(Studienstiftung des deutschen Volkes)* and other talent-promoting organizations with the necessary funds (1985: DM 75.5 million). These organizations select their scholarship holders according to a very careful procedure. They not only expect outstanding achievement in studies and science: they also look for a high level of commitment in regard to the interests of society. Scholarships of this type were awarded to 9,000 students and 1,700 doctoral candidates in 1985.

There are, in addition, federal state programmes *(Länderprogramme)* which provide financial assistance for persons wishing to take their doctor's degree: some 2,200 benefit from this scheme.

Handicapped students

In recent years considerable efforts have been made to improve study opportunities for disabled persons at universities and colleges in the Federal Republic of Germany. As highly qualifying a training as possible for subsequent career and life is particularly important in the case of handicapped persons. Consequently, no-one wanting to study and who has the necessary qualifications to do so, must be debarred from integration into higher education

because of personal disablement. It is for this reason that the German *Studentenwerk* (student's welfare organization) opened up a Central Advice Office for Handicapped Persons in 1982. Its principal commitments are federal-wide documentation of study opportunities für the disabled and participation in the improvement of such opportunities. More than 200 German high education institutions have already delegated a member of staff to deal with disabled persons' affairs. In collaboration with the German *Studentenwerk*, a handbook entitled "Studying with a Handicap" was published in 1985.

All effort is being spearheaded by a series of measures designed to make studying easier for disabled persons. These measures include, for instance, the construction, expansion and re-equipping of "facilities designed to handicapped persons' requirements" at universities. The programme of studies, which has so far been available for handicapped persons with "particular forms of disablement", is also to be extended.

Research and teaching in higher education

Although the high financial and personnel investments by higher education establishments have been mainly training-oriented in the past few years, they have also greatly benefited research. Because of their large variety of subjects, higher education institutions still continue to form the hard core of research potential in the Federal Republic of Germany. These are supplemented by well-equipped research facilities outside higher education, both in regard to basic and applied research. The *Bund* and the *Länder* are pursuing the same goal, i.e. the safeguarding of the efficiency of higher educational research activity, particularly basic research.

Ruhr University, Bochum: a doctoral student of inorganic chemistry working in the laboratory.
Photo: INP/Manfred Vollmer

The availability of modern equiment is of great value for both teaching and research. Photo: a natural scientific practical session at the Johann Wolfgang Goethe University, Frankfurt/Main. Photo: INP/Barbara Klemm

Research and teaching *(Forschung* and Lehre) commitments are (traditionally) on an equal footing in higher education in the Federal Republic of Germany. Despite the growth in student numbers and the danger of a possible decline in this sector, the close link between research and teaching has never been in doubt. Only the manner of realization can and will differ in individual cases.

Universities and technical universities continue to constitute the domain of basic research. A combination of basic and applied research is to be found, first and foremost, in hospital medicine, engineering and agriculture — and, in increasing measure, in economics and the social sciences. Typical, in this connection, is the considerable diversity of higher education research which differs from university to university.

The budgets of higher education institutions, which are financed by the *Länder,* also make allowance for basic staffing and financial requirements in research. Over and above this, professors and other academics can apply to the German Research Association *(Deutsche Forschungsgemeinschaft/DFG)* for the necessary funds. The DFG, whose members come from higher education and research institutions, is the central sponsoring agency for research in the Federal Republic of Germany. It promotes individual research projects in various programmes: "normal procedure" funds a relatively large number of projects (including small ones) from all disciplines. Special programmes *(Schwerpunktprogramme)* are set up in those cases where individual research areas require special financial assistance. All applications are examined by honorary experts to ascertain whether the project in question is purposive, the persons involved are competent and the proposed procedure promising.

Funds for research projects can also be applied for from state programmes sponsored by the *Bund* and *Länder* and from foundations *(Stiftungen).*

In some sectors, especially in the natural and engineering sciences, research facilities require an increasing amount of expensive equipment which is not always available in all universities. This is why focal points *(Schwerpunktbildungen)* are essential in and among individual higher education establishments. Consequently special machinery — particularly the DFG's special research programmes *(Sonderforschungsbereiche)* — has been set up in the Federal Republic of Germany in the past decades. There were 160 such special research programmes at universities and technical universities in 1986. They are usually scheduled to run for 12 to 15 years. Their particular task is to get researchers from various specialized areas to work in concert.

The DFG is financed by the *Bund* and *Länder:* to this must be added funds from foundations. The DFG's total financial capacity came to DM 1 billion in 1986, of which DM 600 million was provided by the Federal Government *(Bund).*

Research programmes at polytechnics are restricted to projects devoted to application and development. These programmes are carried out with a view to transferring new scientific findings directly into industrial practice. The results and experience acquired form an important basis for the further development of study programmes. Polytechnics enjoy special importance in providing technical-scientific advice for business enterprises in their region, particularly the small and medium-size firms.

The transfer of such knowledge and technology is becoming a higher education commitment in ever increasing measure. As in other industrialized countries, it is becoming necessary to make greater use of the research capacities in higher education in the interest of industrial efficiency and competitiveness in the Federal Republic of Germany. Findings by research and development projects must be exploited as quickly as possible outside higher education. On the other hand, higher education institutions, both universities and polytechnics, are interested in current problems and the implementation of their research findings. In some cases, transfer agencies and similar facilities have already been set up. The intensification and expansion of such transfer activities are receiving financial and political support from the state.

In this context, research projects, which are being carried out on the strength of agreements with industrial enterprises or administrations (who also provide some of the funds), are growing in importance. Research funded in this manner (known as *Drittmittelforschung)* has been made easier since 1985 by new regulations in the Higher Education Framework Law.

The situation in regard to the rising academic generation

Because of the expansion process in the last few decades, teaching at universities and colleges has been considerably increased. This has affected the age structure: the average age has dropped markedly.

At the same time, the number of permanent posts is stagnating, or even declining in some areas, e.g. teacher training. This means that professional prospects in higher education have considerably deteriorated for well-qualified, up-and-coming young academics, especially those who are already in possession of their habilitation. Consequently, highly qualified young academics are orienting themselves more and more towards career opportunities outside higher education. This, of course, can have disadvantageous consequences for research and teaching at higher education institutions.

This is being counteracted in various ways: under the terms of the Heisenberg Programme, set up in 1977 and financed by the *Bund* and the *Länder,* young academics in possession of their habilitation or similar qualification of equal value are awarded time-limited fellow-ships. In some cases, the *Länder* have created additional

(temporary) professorial posts to help bridge the period in which, because of the present age structure, university teachers have poor prospects of being appointed professors. The Higher Education Framework Law, which was amended in 1985, enables the setting up of time-limited posts for younger academics in possession of their habilitation.

Women in higher education

Women are still underrepresented in higher education. True, the number of female first-year students is around 40 per cent although the level varies considerably from faculty to faculty. The proportion of female doctoral candidates comes to 22 per cent, and the number of academic assistants *(wissenschaftliche Mitarbeiter)* to 16 per cent. No more than 5 per cent of the professorial body are women. One of the reasons for this is the generally differing careers of men and women during the years in which, on successful completion of studies, they acquire a further academic qualification — even their habilitation. The present situation is regarded as unsatisfactory. Consequently, the following assigment was included in the Higher Education Framework Law in 1985:

> "In the fulfilment of their commitments, higher education institutions will do all they can to remove existing disadvantages for female scholars (i.e. academics)."

Discussions are now going on in the *Länder* and higher education establishments on how this can be accomplished. In some cases women's representatives *(Frauenbeauftragte)* are planned for every higher education institute. Prescribed quotas in favour of women have been rejected in the majority of cases.

Higher education and other countries — Exchange of experience

Research and science *(Forschung* and *Wissenschaft)* are no longer possible without close international cooperation and exchange of information. Consequently, the universities and technical universities in the Federal Republic of Germany have long maintained lively relations with foreign universities. Even in the case of polytechnics, of whom several have developed intensive cooperation with foreign higher education institutions, an extension of foreign relations is being striven for.

In many cases, individual universities have concluded partnership contracts with their foreign counterparts which set out agreed measures (the WRK keeps a list of such partnerships). These agreements include guest-trips by professors, and, in particular, students and young academics. Their interest in study and research abroad is enormous. For years now, attention has been drawn to the professional advantages and personal gain which usually result from such guesting abroad. Students are advised to study for six to twelve months abroad, i.e. not to complete a full studies course there. Cooperation between German and foreign higher education institutions receives special support if it enables students to follow an "integrated course of studies abroad" *(Integriertes Auslandsstudium).* This implies that study achievements abroad are given full recognition by the student's university at home, thus avoiding any loss of time.

The additional expense of studying abroad has been given due consideration by the BAföG promotion scheme: non-repayable grants are awarded. In addition, state-financed scholarships are offered in various programmes and awarded on the strength of a selection procedure. All these promotive measures for German students and young academics are based on the principle that the financing (where this is essential) of study trips abroad is, first and foremost, the responsibility of the native land and not that of international organizations.

Foreign nationals at German higher education institutions

International cooperation does not only consist of trips abroad by German students, young academic staff and professors. On the contrary, it also includes study by foreign students and stays by foreign academics at higher education

institutions and research facilities in the Federal Republic of Germany. The open-door policy for foreign students is a tradition in German higher education. In terms of foreign cultural policy, the state attaches great importance to this.

In 1985, 74,300 foreign students (5.6 per cent of the total student population) were studying at higher education institutions in the Federal Republic of Germany. True, a large number of these were persons residing on a permanent basis in the Federal Republic of Germany, such as the sons and daughters of foreign guest-workers. Some of these students come to the Federal Republic of Germany for one or two semesters only. It is mainly students from developing countries who frequently complete a full course of studies here and wish to acquire a German academic title.

Foreigners wishing to follow a studies course must produce evidence of their previous education which must be recognized as being equal to the entrance qualification *(Hochschulreife)* for the higher education institution in question (i.e. the general or subject-tied Higher School Certificate, or the polytechnic admission certificate). An adequate knowledge of German is also demanded to ensure that the foreign guest-students can follow the lectures and other teaching events. If the evidence of former education does not equate to a German higher education entrance qualification, the foreign applicant must sit a special examination *(Feststellungsprüfung)* to establish his aptitude for admission to the course of study he has chosen.

A preparatory course lasting two semesters is provided at a *Studienkolleg* for this purpose: it is also here that the examination takes place.

New institute building, Berlin Technical University. ***Photo: INP/Christian Jungeblodt***

Basically, the matriculation of foreigners is subjected to no form of numerical limit, even if certain admission-restricted disciplines are subject to allocation by the Central Office in Dortmund. In the case of such restrictions, special quotas guarantee foreign applicants admission opportunity (the foreign student quota is 6 per cent for each of the disciplines medicine, dentistry and veterinary medicine — and pharmacy). The quota is 8 per cent for the other disciplines with restricted admission. Selection is based primarily on qualification (i.e. the grade of the university entrance qualification).

Foreign students do not have to pay study fees at state higher education institutes in the Federal Republic of Germany. They must, however, pay for their subsistence and other expenses themselves. Consequently, proof of adequate resources to finance a course of studies must be produced before a residence permit is issued. Foreign students cannot bank on raising the necessary funds through casual employment whilst studying.

Information on study opportunities and admission requirements may be obtained from the *Deutscher Akademischer Austauschdienst (DAAD)*, Kennedyallee 50, D-5300 Bonn 2. Most higher education institutions have an *Akademisches Auslandsamt (AAA)* for foreign studies applicants and students, or a similar facility. In answer to written inquiries, they provide information on entrance regulations and study opportunities — as well as preliminary courses at *Studienkollegs*.

Higher education and the Third World

German higher education institutions are making a substantial contribution to their counterparts in developing countries as part of the cooperation programme between the Federal Republic of Germany and the Third World. The basis is provided in the main by partnership agreements, e.g. teaching activity by German professors at foreign universities and the care of foreign students and doctoral candidates at universities in the Federal Republic of Germany.

The majority of students from developing countries, however, come, outside these partnerships, to take a full course of studies in the Federal Republic of Germany. The question of suitable study programmes for these students has been intensively discussed in past years, among others by the Science Council *(Wissenschaftsrat)*. Today, the most purposive plan for students from developing countries is considered to be the successful completion of a studies course in their homeland followed by postgraduate studies in the Federal Republic of Germany. Be that as it may, many students from the Third World will continue to aim at a full course of studies here. This group is being increasingly encouraged to take the shorter and more application-related courses offered at polytechnics. Some higher education establishments are developing study programmes in the form of pilot schemes which include the problems and needs of the countries of origin.

The social situation of students from developing countries has also been the subject of wide discussion of late — on the basis of relative surveys. The confrontation with industrial society, social isolation, the requirements of a higher education system that differs greatly from their own system back home and (often) financial difficulties frequently result in considerable problems. Here, the higher education institutes and the Federal and federal state governments are endeavouring to help and to introduce measures which will allow as many qualified foreign students as possible to follow a successful course of studies in the Federal Republic of Germany.

Scholarships for foreign students and academics

The majority of the foreign students study at their own expense in the Federal Republic of Germany: a small number receive scholarships or grants *(Stipendien)* from the governments of their homelands. Scholarships are also offered in limited number from German sources, mainly by the Federal Government, to students and scholars. In 1986 some 7,200 German scholarships were awarded to young foreigners, mostly by the DAAD *(German Academic Exchange Service)*. These scholarships, as a general rule, permit one to two-year studies in the Federal Republic of Germany, or shorter informative or research stays. Scholarships for a full course of studies in the Federal Republic of Germany are made available on a very limited scale by one or two foundations *(Stiftungen)*. Such

scholarships are intended for studies at a polytechnic.

The fellowship programmes run by the Alexander von Humboldt Foundation are of particular importance for scientific cooperation with foreign higher education institutions. In 1986, about 400 research fellowships were awarded to foreign academics with a doctorate for a stay of some two-and-a-half years at German universities.

Basically, scholarships are only granted in those cases where the foreign students and academics are still abroad. Information on the possibilities of obtaining a scholarship may be obtained from the DAAD.

"Bildungsinländer" at higher education institutions

There are currently a large number of foreign workers in the Federal Republic of Germany (1985: 1.6 million) who, in many cases, have been living here with their families for years. Their children attend school together with German pupils — including grammar schools *(Gymnasien)* in increasing measure. This development will continue. Consequently, the Federal Government is reckoning on a growing number of foreign employees' children acquiring a German university or college entrance qualification and wanting to study.

These *"Bildungsinländer"*, as they are called in German, enjoy equal status with German students in all basic matters. In particular, they may receive financial assistance according to BAföG or (in future) be granted scholarships by talent-promotion organizations *(Begabtenförderungswerke)*. Such financial assistance may be forthcoming if they qualify for the freedom of movement *(Freizügigkeit)* according to the guidelines of the European Community, or if their parents were living and legally employed in the Federal Republic of Germany before commencement of studies. According to current regulations, *"Bildungsinländer"* may only be admitted to study courses with restricted registration on the basis of the quotas for foreigners *(Ausländerquoten)*.

Supraregional organizations for students . . .

Whereas the interests of higher education as a whole are represented by the centrally organized West German Rectors Conference *(Westdeutsche Rektorenkonferenz)*, the federal-wide representation of university teaching staff and students is of a more diverse pattern. This corresponds with the political discussion at higher education institutions, where a general social commitment has developed alongside higher educational and research considerations in the past few years.

Thus, no one student organization can claim to represent all undergraduates in the Federal Republic of Germany. The various student committees are amalgamated in the *Vereinigte Deutsche Studentenschaften (VDS)*: student representation in Baden-Württemberg and Bavaria, in particular, does not belong to this umbrella organization. There are also amalgamations at federal level of student organizations with various party-political leanings: they include the Young Socialists *(Jungsozialisten/JUSOS)*, the Ring of Christian Democratic Students *(Ring Christlich Demokratischer Studenten/RCDS)*, the Young Liberals *(Junge Liberale/Julis)* and the Social-Liberal Student Association *(Sozialliberaler Hochschulverband/SLH)*. Trade union and denomination student organizations — as well as the traditional corporations — are also amalgamated at national level. This also applies to the local World University Service (WUS) groups.

. . . and professors

The German University Association *(Deutscher Hochschulverband)* was founded in 1950. It represents the professional interests of professors and habilitated young academic staff at universities and technical universities. It has a membership of 11,600, i.e. roughly 60 per cent of all full-time university teachers. The association is financed by members' contributions. Although this association primarily represents the

Examiners and students at the state law examinations. *Photo: INP/Manfred Vollmer*

higher educational, legal and economic interests of its members vis-à-vis the state and society, it also feels jointly responsible for overall development in higher education. The corresponding representation of professors at polytechnics and for polytechnic courses at comprehensive universities is the Higher Education Teachers Association *(Hochschullehrerbund)* which looks after the interests of this particular group. It has a membership of 3,500, some 50 per cent of the total number of professors in this category. The *Hochschullehrerbund* champions the independent further development of polytechnics. The Association of Higher Education and Science *(Verband Hochschule und Wissenschaft/VHW)*, within the German Civil Service Federation *(Deutscher Beamtenbund)*, also represents the interests of professors at higher education institutions. This applies in like manner to the trade union Education and Science *(Gewerkschaft Erziehung und Wissenschaft/GEW)* which is affiliated to the German Trade Union Federation. The Federation Freedom of Science *(Bund Freiheit der Wissenschaft)* and the Federation of Democratic Scholars (Academics) *(Bund Demokratischer Wissenschaftler)* are also active in the educational and academic fields.

Graduates in the employment system

The increase in student numbers in the last decades — and the subsequent greater number of graduates — has inevitably had repercussions on professional prospects. In the early 1960s, the promising career prospects for university graduates was of decisive importance in the expansion process. Then, in the early 1970s, serious employment problems began to emerge firstly for graduates of teacher training courses and then, in particular, arts and social science courses. Apart from electronics, computer science (informatics) and data processing, there will be more graduates in almost all disciplines than opportunities of employment corresponding to their qualifications. As a result, many graduates will have to accept jobs for which higher education training is not really required.

Unemployed graduates according to selected disciplines (late September 1985)

Specialized Areas:	Total Number end Sept. 85	Total Compared with end Sept. 84 absolute	Total Compared with end Sept. 84 %	Number starting on career Number end Sept. 85	Number starting on career Compared with end Sept. 84 absolute	Number starting on career Compared with end Sept. 84 %
Engineers	19,108	– 1,440	– 7.0	4,036	– 1,306	– 24.4
incl. Architects, Constructional Engineers	8,849	+ 1,233	+ 16.2	1,978	+ 28	+ 1.4
Chemists, Physicists, Mathematicians	3,608	– 534	– 12.9	709	– 265	– 27.2
Lawyers	3,224	– 124	– 3.7	674	+ 86	+ 14.6
Publicists, Interpreters, Librarians	2,195	+ 113	+ 5.4	517	– 101	– 16.3
Artists and allied professions	5,433	+ 915	+ 20.3	1,232	+ 100	+ 8.8
Doctors, Pharmacists	5,702	+ 388	+ 7.3	1,397	+ 133	+ 10.5
Social Welfare	11,532	+ 1,508	+ 15.0	1,795	– 323	– 15.3
Teachers	30,166	+ 620	+ 2.1	4,494	– 216	– 4.6
Economic and Social Scientists	13,445	+ 277	+ 2.1	3,879	– 817	– 17.4
incl. Economic Scientists	6,625	+ 73	+ 1.1	1,786	– 418	– 19.0
Psychologists, Soziologists, Political Scientists	6,148	+ 198	+ 3.3	1,947	– 409	– 17.4
Arts Graduates	7,480	+ 472	+ 6.7	2364	– 326	– 12.1
Natural Scientists	2,956	+ 376	+ 14.6	993	+ 7	+ 0.7
Other disciplines	12,686	+ 354	+ 2.9	3,051	– 93	– 3.0
Total	117,535	2,925	+ 2.6	25,141	– 3,121	– 11.0

Source: Report by the Federal Government on the Employment of Graduates — Situation and Prospects.

Thus the decision to follow a course of higher education studies in the Federal Republic of Germany nowadays is fraught with considerable employment risks for a large numer of first-year students. This has resulted in a re-orientation process on the part of many young persons with university entrance qualifications: in view of the gloomy prospects in many professions, they are opting out of university or college courses in favour of alternative vocational training. Other the other hand, it is not without significance for many young persons that the unemployment level among graduates is considerably lower than any other sector of the labour market. The general level of unemployment was 9.3 per cent in late 1985: the unemployment level among graduates came to no more than 4.9 per cent.

Because of incompatability with the Constitution *(Grundgesetz)* of the Federal Republic of Germany, admission restrictions for certain disciplines, based on the likely requirements in certain vocational areas, have not been considered. On the contrary, it is considered only right that persons entitled to study, and who must accept the personal risks involved, should make their own decisions in regard to studies and profession.

Developments to date have largely eliminated the former privileged position of university graduates who accounted for only a small percentage of a year group in years gone-by. As a result, graduate qualifications will carry much reduced weight. The anticipated rise in the number of university graduates will show that an academic title is no longer the passport to a good job and prestige: it is professional achievement which will count. This quantitative development may also give rise to a situation where the income of graduates embarking on a profession will be lower.

Political parties and higher education policy

Questions relating to the commitments, structure and organization of higher education has been a constant source of disagreement among political parties for many years. They were all agreed on the fact, however, that

Seminar at the Johann Wolfgang Goethe University, Frankfurt/Main. *Photo: INP/Barbara Klemm*

the higher education system should be greatly expanded and that universities should have "open doors", i.e. admission restrictions should be avoided wherever justifiably possible. Restricted admission is known as *Numerus clausus*. The "civic right to education" was to be taken advantage of by all as a personal educational opportunity. There is now also a large measure of agreement on the need to pay greater attention to qualitative matters, following the expansion phase. The main controversial issues are as follows:

The Christian Democratic Union *(Christlich Demokratische Union/CDU)* and the Christian Social Union *(Christlich-Soziale Union/CSU)* have underscored the need to implement the principle of differentiation more emphatically for the large student population: this can be accomplished by highlighting the different commitments of the various types of higher education institutions and their particular profiles, especially the universities. At the same time, increased competition is considered necessary in the higher education system, in the interests of improved teaching and research performance. In view of the declining numbers of first-year students, higher education institutions will soon be vying with each other anyway in an effort to attract students. It is for this reason that there must be greater autonomy of higher education in various specialized areas. A new studies structure is being striven for at universities: it is to provide a large number of young persons with a broadly-based academic course lasting about four years. At the same time it is to permit "special encouragement and promotion" of exceptional talent.

The Social Democratic Party *(Sozialdemokratische Partei Deutschlands/SPD)* rejects such ideas. They fear a division of the student body into two halves, and preferential treatment of an elite as a result. Instead, the SPD asks for "promotion and not selection". They call for the safeguarding of equal opportunity, the abolition of financial assistance *(BAföG)* in the form of full loans, introduced in 1983, and the reinstatement of (non-repayable) grants for students once more. In accordance with the demo-

cratic constitution of higher educational institutions, the SPD wants to rescind the enhanced position of the professorial body (since 1985) in the self-administration process at universities and colleges. The SPD has also attacked the 1985 law which allows the conclusion of a larger number of time-limited contracts for academic (scientific) staff in future. The SPD has called for greater tenure for academic staff and also criticizes the fact that — in agreement with the trade unions — the new regulations were introduced statutorily and not by collective agreement *(Tarifvertrag)*.

In regard to higher education research, the SPD see a danger of an uncontrolled opening up of universities for research assignments from the industrial and military fields. Consequently, measures have been called for which guarantee the independent status of universities and colleges.

The Free Democratic Party *(Freie Demokratische Partei/F.D.P.)* has more or less the same goals as the CDU and the CSU in higher education policy. It emphasizes its demand for greater autonomy and freedom of action for universities and colleges and less red tape in the relationship between state and higher education. In this connection, it questions the central admission and allocation system (via the ZVS in Dortmund) in regard to study courses with restricted registration. It supports improved administrative opportunities for private initiatives in the higher education field (privately financed professorships and research institutes).

The Greens (ecological party) demand greater rights of codetermination on the part of academic staff *(Wissenschaftler)* at state or private research institutions. They support "all efforts and initiatives directed at unhampered activity, political and scientific, at higher education institutions". They are of the opinion that science in the "service of humanity and nature" should receive greater emphasis in higher education research.

Appendix

HIGHER EDUCATION INSTITUTIONS IN THE FEDERAL REPUBLIC OF GERMANY

Universities, Technical Universities and Colleges with individual university study courses:

Rheinisch-Westfälische Technische Hochschule (Rhenish-Westphalian Technical University) Aachen
Universität (University) Augsburg
Universität (University) Bamberg
Universität (University) Bayreuth
Freie Universität (Free University) Berlin
Technische Universität (Technical University) Berlin
Universität (University) Bielefeld
Ruhr-Universität (Ruhr University) Bochum
Rheinische Friedrich-Wilhelms-Universität (Rhenish Frederick William University) Bonn
Technische Universität Carolo-Wilhelmina (Technical University Carolo-Wilhelmina) Braunschweig
Universität (University) Bremen
Technische Universität (Technical University) Clausthal
Technische Hochschule (Technical University) Darmstadt
Universität (University) Dortmund
Universität (University) Düsseldorf
Universität-Gesamthochschule (Comprehensive University) Duisburg
Katholische Universität (Catholic University) Eichstätt
Friedrich-Alexander-Universität (Frederick Alexander University) Erlangen-Nürnberg
Universität-Gesamthochschule (Comprehensive University) Essen
Johann Wolfgang Goethe-Universität (Johann Wolfgang Goethe University) Frankfurt am Main
Albert-Ludwigs-Universität (Albert Ludwig University) Freiburg im Breisgau
Justus-Liebig-Universität (Justus Liebig University) Gießen
Georg-August-Universität (Georg August University) Göttingen
Fernuniversität-Gesamthochschule (Open Comprehensive University) Hagen
Universität (University) Hamburg
Technische Universität (Technical University) Hamburg-Harburg
Hochschule für Wirtschaft und Politik (College of Economics and Politics) Hamburg
Universität der Bundeswehr (Federal Armed Forces University) Hamburg
Universität (University) Hannover
Medizinische Hochschule (Medical College) Hannover
Tierärztliche Hochschule (College of Veterinary Medicine) Hannover
Ruprecht-Karls-Universität (Ruprecht Karl University) Heidelberg
Hochschule (College) Hildesheim
Universität Hohenheim (Hohenheim University) Stuttgart-Hohenheim
Universität (University) Kaiserslautern
Universität Fridericiana, Technische Hochschule (Fridericiana University, Technical University) Karlsruhe
Gesamthochschule-Universität (Comprehensive University) Kassel
Christian-Albrechts-Universität (Christian Albrecht University) Kiel
Private Wissenschaftliche Hochschule für Unternehmensführung (Private College of Business Management) Koblenz
Universität (University) Köln (Cologne)
Deutsche Sporthochschule (German College of Sport) Köln (Cologne)
Universität (University) Konstanz
Medizinische Hochschule (Medical College) Lübeck
Hochschule (College) Lüneburg
Johannes Gutenberg-Universität (Johannes Gutenberg University) Mainz
Universität (University) Mannheim
Philipps-Universität (Philipp University) Marburg
Ludwig-Maximilians-Universität (Ludwig Maximilian University) München (Munich)
Technische Universität (Technical University) München (Munich)
Universität der Bundeswehr (Federal Armed Forces University) München-Neubiberg (Munich-Neubiberg)
Westfälische Wilhelms-Universität (Westphalian William University) Münster
Universität (University) Oldenburg
Universität (University) Osnabrück
Universität-Gesamthochschule (Comprehensive University) Paderborn
Universität (University) Passau
Universität (University) Regensburg
Universität des Saarlandes (Saarland University) Saarbrücken
Universität-Gesamthochschule (Comprehensive University) Siegen
Hochschule für Verwaltungswissenschaften (College of Administration) Speyer

Universität (University) Stuttgart
Universität (University) Trier
Eberhard-Karls-Universität (Eberhard Charles University) Tübingen
Universität (University) Ulm
Private Universität (Private University) Witten-Herdecke
Bayerische Julius-Maximilians-Universität (Bavarian Julius-Maximilian University) Würzburg
Bergische Universität-Gesamthochschule (Bergische Comprehensive University) Wuppertal

Philosophical-Theological Colleges (Catholic)

Phil.-Theologische Hochschule Sankt Georgen (Philosophical-Theological College of St. George) Frankfurt am Main
Theologische Fakultät (Theological Faculty) Fulda
Theologische Fakultät (Theological Faculty) Paderborn
Theologische Fakultät (Theological Faculty) Trier

Ecclesiastical Colleges of Theology (Protestant)

Kirchliche Hochschule (Ecclesiastical College) Berlin
Kirchliche Hochschule Bethel (Bethel Ecclesiastical College) Bielefeld
Augustana-Hochschule (Augustan College) Neuendettelsau
Lutherische Theologische Hochschule (Lutheran Theological College) Oberursel
Kirchliche Hochschule (Ecclesiastical College) Wuppertal

College of Jewish Studies

Hochschule für Jüdische Studien (College of Jewish Studies) Heidelberg

Teachers' Training Colleges

Pädagogische Hochschule (Teachers' Training College) Flensburg
Pädagogische Hochschule (Teachers' Training College) Freiburg im Breisgau
Pädagogische Hochschule (Teachers' Training College) Heidelberg
Pädagogische Hochschule (Teachers' Training College) Karlsruhe
Pädagogische Hochschule (Teachers' Training College) Kiel
Erziehungswissenschaftliche Hochschule Rheinland-Pfalz mit Abteilungen in (Rhineland-Palatinate College of Educational Science with departments in) Koblenz und Landau
Pädagogische Hochschule (Teachers' Training College) Ludwigsburg
Pädagogische Hochschule (Teachers' Training College) Reutlingen
Pädagogische Hochschule (Teachers' Training College) Weingarten

Colleges of Art and Music

Hochschule der Künste (College of the Arts) Berlin
Hochschule für gestaltende Kunst und Musik (College of Creative Art and Music) Bremen
Hochschule für Bildende Künste (College of Visual Arts) Braunschweig
Staatliche Kunstakademie (State Academy of Art) Düsseldorf
Staatliche Hochschule für Bildende Künste (State Academy of Visual Arts) Frankfurt
Hochschule für Bildende Künste (College of Visual Arts) Hamburg
Staatliche Akademie der Bildenden Künste (State Academy of Visual Arts) Karlsruhe
Akademie der Bildenden Künste (Academy of Visual Arts) München (Munich)
Hochschule für Fernsehen und Film (College of Television and Film) München
Akademie der Bildenden Künste (Academy of Visual Arts) Nürnberg (Nuremberg)
Hochschule für Gestaltung (College of Design) Offenbach
Staatliche Akademie der Bildenden Künste (State Academy of Visual Arts) Stuttgart
Staatliche Hochschule für Musik Westfalen-Lippe (Westphalia-Lippe State College of Music) Detmold
Staatliche Hochschule für Musik Ruhr (Ruhr State College of Music) Essen
Hochschule für Musik und darstellende Kunst (College of Music and Interpretative Art) Frankfurt
Staatliche Hochschule für Musik (State College of Music) Freiburg
Hochschule für Musik und darstellende Kunst (College of Music and Interpretative Art) Hamburg
Staatliche Hochschule für Musik und Theater (State College of Music and Theatre) Hannover
Staatliche Hochschule für Musik (State College of Music) Heidelberg—Mannheim
Staatliche Hochschule für Musik (State College of Music) Karlsruhe
Staatliche Hochschule für Musik Rheinland (Rhinland State College of Music) Köln (Cologne)
Musikhochschule (College of Music) Lübeck
Hochschule für Musik (College of Music) München (Munich)
Musikhochschule des Saarlandes (Saarland College of Music) Saarbrücken
Staatliche Hochschule für Musik und darstellende Kunst (State College of Music and Interpretative Art) Stuttgart

Staatliche Hochschule für Musik (State College of Music) Trossingen
Hochschule für Musik (College of Music) Würzburg

Polytechnics (without ecclesiastical and administration establishments)

Fachhochschule (Polytechnic) Aachen
Fachhochschule (Polytechnic) Aalen
Fachhochschule (Polytechnic) Augsburg
Technische Fachhochschule (Technical College) Berlin
Fachhochschule für Wirtschaft (College of Economics) Berlin
Fachhochschule für Sozialarbeit und Sozialpädagogik (College of Social Welfare and Social Pedagogics) Berlin
Fachhochschule der Deutschen Bundespost (German Federal Post Office College) Berlin
Fachhochschule (Polytechnic) Biberach
Fachhochschule (Polytechnic) Bielefeld
Fachhochschule (Polytechnic) Bochum
Fachhochschule Bergbau (Mining College) Bochum
Fachhochschule (Polytechnic) Braunschweig/Wolfenbüttel
Hochschule (College) Bremen
Hochschule (College) Bemerhaven
Fachhochschule (Polytechnic) Coburg
Fachhochschule (Polytechnic) Darmstadt
Fachhochschule der Deutschen Bundespost (German Federal Post Office College) Dieburg
Fachhochschule (Polytechnic) Dortmund
Fachhochschule (Polytechnic) Düsseldorf
Fachhochschule Ostfriesland (East Friesland Polytechnic) Emden
Fachhochschule für Technik (College of Technology) Esslingen
Fachhochschule für Sozialwesen (College of Social Welfare) Esslingen
Fachhochschule (Polytechnic) Flensburg
Fachhochschule (Polytechnic) Frankfurt
Fachhochschule (Polytechnic) Fulda
Fachhochschule (Polytechnic) Furtwangen
Fachhochschule (Polytechnic) Gießen/Friedberg
Fachhochschule (Open University) Hagen
Fachhochschule (Polytechnic) Hamburg
Fachhochschule (Polytechnic) Hannover
Fachhochschule (Polytechnic) Heilbronn
Fachhochschule (Polytechnic) Hildesheim/Holzminden
Naturwiss.-Technische Akademie Prof. Grübler (Prof. Grübler Natural Scientific-Technological Academy) Isny
Fachhochschule (Polytechnic) Karlsruhe
Fachhochschule (Polytechnic) Kempten
Fachhochschule (Polytechnic) Kiel
Fachhochschule (Polytechnic) Köln (Cologne)
Rheinische Fachhochschule (Rhenish Polytechnic) Köln (Cologne)
Fachhochschule (Polytechnic) Konstanz
Fachhochschule Niederrhein (Lower Rhine Polytechnic) Krefeld/Mönchengladbach
Fachhochschule Lippe (Lippe Polytechnic) Lemgo-Detmold
Fachhochschule (Polytechnic) Lübeck
Fachhochschule Nordostniedersachsen mit Abteilungen in Buxtehude und Suderburg (Northeast Lower Saxony Polytechnic with departments in Buxtehude and Suderburg) Lüneburg
Fachhochschule des Landes Rheinland-Pfalz Mainz mit Abteilungen in (Rhineland-Palatinate State Polytechnic with departments in) Bingen, Kaiserslautern, Koblenz, Ludwigshafen/Worms und Trier
Fachhochschule für Technik (College of Technology) Mannheim
Fachhochschule für Sozialwesen (College of Social Welfare) Mannheim
Fachhochschule (Polytechnic) München (Munich)
Fachhochschule (Polytechnic) Münster
Fachhochschule (Polytechnic) Nürnberg (Nuremberg)
Fachhochschule (Polytechnic) Nürtingen
European Business School Östrich-Winkel
Fachhochschule (Polytechnic) Offenburg
Fachhochschule (Polytechnic) Oldenburg
Fachhochschule (Polytechnic) Osnabrück
Fachhochschule für Wirtschaft (College of Economics) Pforzheim
Fachhochschule für Gestaltung (College of Design) Pforzheim
Fachhochschule (Polytechnic) Ravensburg-Weingarten
Fachhochschule (Polytechnic) Regensburg
Fachhochschule für Technik und Wirtschaft (College of Technology and Economics) Reutlingen
Fachhochschule (Polytechnic) Rosenheim
Fachhochschule des Saarlandes (Saarland Polytechnic) Saarbrücken
Fachhochschule für Gestaltung (College of Design) Schwäbisch-Gemünd
Fachhochschule für Technik (College of Technology) Sigmaringen
Fachhochschule für Technik (College of Technology) Stuttgart
Fachhochschule für Bibliothekswesen (College of Library Science) Stuttgart
Fachhochschule für Druck (College of Printing) Stuttgart
Fachhochschule (Polytechnic) Ulm
Fachhochschule Prof. Harms (Prof. Harms Polytechnic) Wedel
Fachhochschule Weihenstephan (Weihenstephan Polytechnic) Freising-Weihenstephan
Fachhochschule (Polytechnic) Wiesbaden
Fachhochschule Fresenius (Fresenius Polytechnic) Wiesbaden
Fachhochschule (Polytechnic) Wilhelmshaven
Fachhochschule (Polytechnic) Würzburg-Schweinfurt

Ecclesiastical Colleges of Social work

Evangelische Fachhochschule (Protestant College) Berlin
Evangelische Fachhochschule Rheinland-Westfalen-Lippe (Rhineland-Westphalia-Lippe Protestant College) Bochum
Evangelische Fachhochschule (Protestant College) Darmstadt
Katholische Fachhochschule für Sozialwesen und Religionspädagogik (Catholic College of Social Welfare and Religious Teaching) Freiburg im Breisgau
(Evangelische) Fachhochschule für Sozialwesen, Religionspädagogik und Gemeindediakonie (Protestant College of Social Welfare, Religious Teaching and Parish Welfare) Freiburg im Breisgau
Evangelische Fachhochschule für Sozialpädagogik der Diakonenanstalt des Rauhen Hauses (Protestant College of Social Pedagogy belonging to the Deacons' Institute of the "Rauhes Haus") Hamburg
Evangelische Fachhochschule (Protestant College) Hannover
Katholische Fachhochschule Nordrhein-Westfalen, Köln mit Abteilungen in (Northrhine-Westphalian Catholic College with departments in) Aachen, Münster und Paderborn
Evangelische Fachhochschule für Sozialwesen (Protestant College of Social Welfare) Ludwigshafen
Katholische Fachhochschule für Sozialarbeit, Sozialpädagogik und Praktische Theologie (Catholic College of Social Work, Social Pedagogy and Practical Theology) Mainz
Katholische Stiftungsfachhochschule (Catholic Foundation College) München (Munich)
Evangelische Stiftungsfachhochschule (Protestant Foundation College) Nürnberg
Katholische Fachhochschule Norddeutschland Osnabrück mit Abteilung in (North German Catholic College with a department in) Vechta
Evangelische Fachhochschule für Sozialwesen (Protestant College of Social Welfare) Reutlingen
Katholische Fachhochschule für Sozialwesen (Catholic College of Social Welfare) Saarbrücken

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Addresses of the responsible federal ministries

Bundesminister für Bildung und Wissenschaft
(Federal Minister of Education and Science)
Heinemannstraße 2
D-5300 Bonn 2

Bundesminister für Forschung und Technologie
(Federal Minister of Research and Technology)
Heinemannstraße 2
D-5300 Bonn 2

Addresses of the responsible federal state *(Länder)* ministries

Baden-Württemberg:
Minister für Wissenschaft und Kunst
(Minister of Science and Art)
Königstraße 46
D-7000 Stuttgart 1

Bavaria:
Staatsminister für Wissenschaft und Kunst
(State Minister of Science and Art)
Salvatorplatz 2
D-8000 München 2

Berlin:
Senator für Wissenschaft und Forschung
(Senator for Science and Research)
Bredtschneiderstraße 5—8
D-1000 Berlin 19

Bremen:
Senator für Bildung, Wissenschaft und Kunst
(Senator for Education, Science and Art)
Rembertiring 8—12
D-2800 Bremen 1

Hamburg:
Senator für Wissenschaft und Forschung
(Senator for Science and Research)
Hamburger Straße 37
D-2000 Hamburg 76

Hesse:
Minister für Wissenschaft und Kunst
(Minister of Science and Art)
Luisenplatz 10
D-6200 Wiesbaden

Lower Saxony:
Minister für Wissenschaft und Kunst
(Minister of Science and Art)
Prinzenstraße 14
D-3000 Hannover 1

Northrhine-Westphalia:
Minister für Wissenschaft und Forschung
(Minister of Science and Research)
Völklinger Straße 49
D-4000 Düsseldorf 1

Rhineland-Palatinate:
Kultusminister
(Education Minister)
Mittlere Bleiche 61
D-6500 Mainz 1

Saarland:
Minister für Kultus, Bildung und Sport
(Minister of Culture, Education and Sport)
Saaruferstraße 32
D-6600 Saarbrücken 1

Schleswig-Holstein:
Kultusminister
(Education Minister)
Düsternbrooker Weg 64—68
D-2300 Kiel

Other important addresses in higher education

Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland
(Standing Conference of the Education Ministers of the *Länder* in the Federal Republic of Germany)
Nassestraße 8
D-5300 Bonn 1

Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung
(Federal Government/Federal States Commission of Educational Planning and Research Promotion)
Friedrich-Ebert-Allee 39
D-5300 Bonn 1

Wissenschaftsrat
(Science Council)
Marienburger Straße 8
D-5000 Köln-Marienburg

Westdeutsche Rektorenkonferenz
(West German Rectors Conference)
Ahrstraße 39
D-5300 Bonn 2

Deutsche Forschungsgemeinschaft
(German Research Association)
Kennedyallee 40
D-5300 Bonn 2

Deutscher Akademischer Austauschdienst (DAAD)
(German Academic Exchange Service)
Kennedyallee 50
D-5300 Bonn 2

Alexander-von-Humboldt-Stiftung
(Alexander von Humboldt Foundation)
Jean-Paul-Straße 12
D-5300 Bonn 2

Deutsches Studentenwerk
(German Student Welfare)
Weberstraße 55
D-5300 Bonn 1

Hochschul-Informations-System GmbH
(Higher Education Information System)
Goseriede 9
D-3000 Hannover 1

A Guide to the Higher Education System

Akademisches Auslandsamt: a higher education facility responsible for international cooperation. Looks after foreign students and arranges studies in other countries for German students.

Alexander von Humboldt-Stiftung: a federal-financed organization. It awards scholarships to young foreign academics with a doctor's degree which enable them to pursue research projects in the Federal Republic of Germany. Similar awards are made to young German academics with a doctor's degree to enable them to carry out research in other countries.

Allgemeine Hochschulreife: this certificate is acquired at grammar schools *(Gymnasien)* after 13 years of continuous schooling. It is usually known as *Abitur* and represents an entrance qualification to all higher education establishments. Some of the study courses require practical professional experience prior to commencement of studies. Additional proof of aptitude must be offered for art, music or sport studies.

Allgemeiner Studentenausschuß (AStA): executive body of the (registered) student body at universities and colleges.

Bildungsinländer: mainly the sons and daughters of foreign workers employed in the Federal Republic of Germany who have attended German schools — like German pupils — and have acquired school certificates and entitlement to higher educational studies.

Bundesausbildungsförderungsgesetz (BAföG): the Federal Training Promotion Law regularizes the payment of loans and grants (subsidies) to help German students (and in exceptional cases) foreign students to finance their study courses.

Bund-Länder-Kommission (BLK) für Bildungsplanung und Forschungsförderung: the Federal Government/ Federal States Commission for Educational Planning and Research Promotion operates at governmental level, dealing with important current questions concerning education policy, and coordinating planning and budgetary considerations in the field of research.

Deutscher Akademischer Austauschdienst (DAAD): the German Academic Exchange Service is a higher education organization for the promotion of relations with universities and colleges in other countries. It is funded almost exclusively from federal sources. It provides information on the opportunities of study in the Federal Republic of Germany and abroad, and, within the terms of special programmes, awards scholarships to foreign and German students and young academics.

Deutsche Forschungsgemeinschaft (DFG): the German Research Association is an autonomous organization set up by higher education institutions and research facilities. It provides financial assistance for higher education research projects. Its funds stem mainly from Federal Government and federal state sources.

Diplomgrad: an academic title — like a degree — which is conferred on university and college graduates who have successfully taken their final university or college examinations, particularly in the natural, economic and social sciences.

Doktorgrad: a doctorate is an academic qualification awarded on the strength of a dissertation and an oral examination *(Promotion).* Basically, only those persons who have obtained a degree *(Diplom)* or successfully passed a similar qualifying examination are allowed to embark on a course of doctoral studies.

Deutsches Studentenwerk (DSW): this student welfare organization is an amalgamation of existing social facilities *(Studentenwerke);* looks after the general socio-political interests of the student population.

Fachhochschule: these polytechnic institutions were first set up in 1970. Their purpose is to provide application-related training of shorter duration on a scientific or artistic basis. This commitment includes application-related research and development.

Fachhochschulreife: this polytechnic entrance qualification is normally acquired on passing a final examination at a senior technical school *(Fachoberschule)* after twelve continuous years of schooling. It provides entitlement to a course of studies at a polytechnic or corresponding courses at comprehensive universities *(Gesamthochschulen).*

Fernuniversität: this comprehensive open (correspondence) university offers programmes mainly designed for part-time or further education studies. Written and audiovisual media are supplemented by

personal attendance events. There are 39 regional studies centres to look after the students.

Gesamthochschule: this type of higher education establishment was first set up around 1970. It combines all the research and teaching activities which are normally to be found at universities, teachers' training colleges and polytechnics. The "integrated study courses" permit students to conclude their studies at various times with varying final examinations *(Diplomprüfungen)* and qualifications.

Hochschul-Informations-System GmbH (HIS): this organization is financed by the Federal Government *(Bund)* and the federal states *(Länder)*. It elaborates rationalization processes for higher educational administration and conducts surveys and prepares experts' reports which serve as a basis for decisions on higher education policy.

Hochschulbauförderungsgesetz (HBFG): the Higher Education Building Promotion Law which came into effect in 1970, regularizes joint planning and financing of investment projects by the Federal Government *(Bund)* and the federal states *(Länder)* in higher education.

Hochschulrahmengesetz (HRG): this federal law was enacted in 1976 and amended in 1985. Basically, it provides the federal states *(Länder)* with general principles in regard to the higher education system, i.e. a framework guide.

Kultusministerkonferenz (KMK): the Education Ministers Conference was set up by the federal states *(Länder)* as a means of providing consultations and coordination in education policy. There is a special committee for higher education policy and administration.

Magister Artium (MA): this academic title — Master of Arts — is awarded to graduates who have successfully passed their final examination at university, particularly in philological and cultural disciplines.

Numerus clausus (NC): the Latin designation for admission restrictions which is only applicable if the number of applicants in a particular discipline exceeds the places available. Such rulings are then valid for German and foreign students. The admission procedure in such cases has been regularized in a state treaty by the federal states *(Länder)* on the basis of the Higher Education Framework Law (see above).

Staatsprüfung: state examinations are designed for future teachers, lawyers, doctors, dental surgeons, veterinary surgeons, dispensing chemists and food chemists. It is the normal final examination for these professions on conclusion of higher education studies. State authorities are responsible for this examination which is the basic qualification for entry into the respective professions.

Studentenschaft: this is the registered student body which exists in the higher education institutions of the majority of federal states *(Länder)*. Membership and contributions are compulsory. The *Studentenschaft* has higher educational commitments (representation of the students' study, social and cultural interests). It has no general political mandate.

Studentenwerk: an organization entrusted with the social welfare of students at all higher education institutions. It runs a Mensa (student restaurant) and student hostels and is mainly responsible for making BAföG payments to students.

Westdeutsche Rektorenkonferenz (WRK): an organization in which higher education institutions of all types work together on a permanent basis to fulfil their commitments and look after common interests.

Wissenschaftsrat: an advisory body set up jointly by the Federal Government *(Bund)* and the federal states *(Länder)* to submit recommendations on the structural development of higher education institutions, investments in higher education and research matters. The members representing the academic field have the same number of votes as the members representing the Federal *(Bund)* and the federal state *(Länder)* governments.

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